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ABSTRACT

The purpose of this project was (a) to improve an existing measure of the values of young children and (b) to explore possible relationships between these values and other variables: adjustment to school; achievement in school; congruities with teacher; sex; ethnic group; and grade level. The previous year's project involved the development of an objective, self-administering inventory designed to measure the values of young children. The Values Inventory for Children (VIC) originally contained 60 pictorial items; and was administered in the Fall of 1970, to 996 children in grades one through three from five ethnic groups: Mexican-American, Oriental, Anglo, Negro, and Indian. The general conclusion from this study is that values do play a part in the adjustment of the child to school and in his achievement although it was impossible in this study to determine exactly how much they contribute over and above the child's ability since no precise measure of ability was available. It was also concluded that the more like the teacher a child is to start with at the beginning of the school year and the more he becomes like her over eight months, the better he will do in school. (Author)

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FINAL REPORT
Project No. 10283
Contract No. OEC-9-71-0029 (508)

RELATIONSHIP BETWEEN TEACHER-PUPIL VALUE
DISPARITIES AND THE ACADEMIC ACHIEVEMENT,
CLASSROOM BEHAVIOR, AND SCHOOL
ADJUSTMENT OF ELEMENTARY CHILDREN

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April 30, 1972

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

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U. S. DEPARTMENT OF
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National Center for Educational Research and Development

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PREFACE

The development of a test of values for young children is a major undertaking, requiring not only the cooperation but also the enthusiasm of a large number of individuals. Throughout all phases of both pretesting and final test administration, the research staff received warm receptions and helping hands from educators at all levels. Although it is possible to acknowledge only those responsible for obtaining samples of children and coordinating testing efforts, the staff is also grateful to all of the many teachers who took the test, rated their children on a number of characteristics, evaluated the test, assisted in administration of the test, and provided additional insight into the responses of their pupils. We also thank the teacher aides and older students who contributed to this effort.

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Finally, this project could not have been successfully completed without the contributions of Mrs. Juanita Bryson who not only administered tests individually, but also had major responsibility for mass administrations in the Spring and Fall. She was ably assisted by Miss Ilena Budnoff in group administration and transcription of responses to code sheets for data analysis. Mr. Irving Budnoff served as consultant in matters statistical, enabling the investigators to overcome numerous problems relating to data analysis. Mr. Clay Young is given much-deserved credit for the quality of the items which were produced by his skilled pen and his unusual ability to translate sketchy ideas into meaningful pictures.

SUMMARY

The purpose of this project was (a) to improve an existing measure of the values of young children and (b) to explore possible relationships between these values and other variables: adjustment to school; achievement in school; congruities with teacher; sex; ethnic group; and grade level.

The previous year's project involved the development of an objective, self-administering inventory designed to measure the values of young children. The Values Inventory for Children (VIC) originally contained 60 pictorial items; and was administered in the Fall of 1970, to 996 children in grades one through three from five ethnic groups: Mexican-American, Oriental, Anglo, Negro, and Indian.

Factor analyses of the original items revealed eight underlying dimensions which were named: Social Conformity; Academic/Health; Me First; Asocial; Aesthetics; Closeness to Adults; Sociability; and Masculinity. Continuing refinement of the instrument involved eliminating items which did not meet good test construction criteria. Reliabilities of factors (Spearman-Brown formula) were fairly good (.61 to .82) considering that some of the dimensions contained very few items.

In the Spring of 1971, 611 children were retested. Teachers also "took" the VIC and rated children on the dimensions obtained from the first testing as well as on indices of adjustment to class and to peers. Teachers' ratings provided one set of criteria employed in an attempt to validate factor scores. The other criterion consisted of reading scores obtained from concurrent Statewide testing.

Teachers tended to give more "desirable" ratings to girls than to boys, to second-graders than to either first- or third-graders, and to Anglos and Orientals rather than to Mexican-Americans and Negroes. They liked best those students who were conforming, not asocial, and who liked physical closeness to adults.

Considering factor scores as predictors, the best value predictors of both adjustment to and academic achievement in school were approval of socially conforming behaviors and disapproval of asocial behaviors. One of the most interesting and consistent findings was that Academic value (i.e., liking for school) was unrelated to either adjustment or achievement.

A measure of teacher-child value congruity was based upon the commonality between the child's and the teacher's responses to the VIC items. It was found that the more like a teacher a child is in values, (a) the more favorably that child will be perceived by the teacher and (b) the higher that child will score on reading achievement.

The original VIC was revised by (1) eliminating items that did not fit the factor structure or that were considered by teachers to be least

relevant to their understanding of children and (2) devising new items to expand the seven dimensions of greatest interest and utility. In the process, the Aesthetic factor was dropped and the Academic factor purified by elimination of health items.

The revised VIC, containing 50 items, was administered to 1133 previously untested children in grades one through four. The seven factors obtained were extremely close to those predicted, and were considerably strengthened by the addition of homogeneous items. Reliabilities of factors increased, ranging from .74 to .92.

The revised test sample included only three ethnic groups (Mexican-American, Anglo, and Negro), all in integrated schools. Their test results were compared with those of children taking the original VIC. In the case of most factors, comparisons by sex, grade, and ethnic group (where appropriate) provided essentially the same results for the revised test as were obtained using the original.

The general conclusion is that values do play a part in the adjustment of the child to school and in his achievement although it was impossible in this study to determine exactly how much they contribute over and above the child's ability since no precise measure of ability was available. It was also concluded that the more like the teacher a child is to start with at the beginning of the school year and the more he becomes like her over eight months, the better he will do in school.

CHAPTER ONE

BACKGROUND OF THE RESEARCH

For the reader not familiar with the first year of development of the Values Inventory for Children (VIC), a summary of that year's work is presented in this chapter. A complete report, including an extensive review of the literature concerning children's values and tests applicable to young children, appears in Guilford, Gupta, and Goldberg (1971). That report can be obtained from the Educational Resources Information Center (ERIC) Document Reproduction Service (EDRS). For other useful reviews see Gorsuch (1971) and Ryan (1971).

The purpose of the first year's project was to develop an objective, self-administering inventory designed to measure the values of young children. The instrument was to be applicable to at least grades one, two, and three and to all major ethnic groups.

The rationale upon which the test was constructed considered values in terms of expressed "liking" or "preference" for objects, persons, and activities that have importance for children in terms of meeting their needs. The needs employed in item development were derived from Maslow's (1954) hierarchical model and included Physiological, Safety, Love, Esteem, Beauty, and Self-actualization. An additional category, representing a major disvalue, was added and labeled Aggression.

A review of the literature provided insight with respect to both the attitudes and values of young children and the problems encountered in attempting to measure dimensions in the affective domain when the subjects are preliterate. Particular attention was paid to those studies in which ethnic comparisons had been made. In addition, sex and age differences were examined.

Items were developed by an iterative process which began with interviewing young children to elicit their responses to questions based on the hypothesized seven dimensions. Review of the taped interviews provided the research staff with ideas for pictorial items which were then prepared by an artist and readministered to interviewees. If an item was understood and the response to the item was consistent with the response to the interview question, the item was retained for further testing. In all, more than eighty such items were constructed.

Items were of two types: (1) a single-stimulus picture and four alternative responses; (2) a two-stimulus picture and one choice response. In both cases the response was one having to do with the way the subject felt. In the first case, the response was to mark a face which showed how much he "liked" the picture and in the second, the response was to mark the picture he "liked best." The single-stimulus-four-response items were called "X" items and because of the difficulty of the response mode, were preceded by a set of response-training items so that children could learn the appropriate response to correspond to their feeling about each picture. The choice in the X form was between a face with (a) a frown, (b) no expression, (c) a slight smile, and (d) a broad smile. In the case of the two-stimulus "Y" items, pictures were as identical as

possible with the exception of the one concept with respect to which the child was to respond. In some cases the difference consisted of a change in the activity depicted. In others it might be either a change in the situation or in the position of the picture-subject.

The picture-subject was the child in the picture with whom the child taking the test was to identify. Boys received test booklets with a cover picture of an ethnically ambiguous boy wearing a striped shirt and were told: "This is you." Girls received booklets with a cover picture of a girl in a striped dress and were given the same instruction. The faces to be marked in the X booklets were the same as those of the picture-subject (i. e., girl faces for girls; boy faces for boys). Boy items depicted boys engaged in the activities; Girl items depicted girls in the same activities except where inappropriate. As an example of an exception, the Y item called "Play 1/many" consisted of two pictures. In the first, the picture-subject plays with one friend while in the second he (she) plays with several. In the case of boys, the game is marbles. For girls, the activity is playing with dolls. Pictures in which the picture-subject did not appear because it seemed desirable to avoid identification with the activity or because the stimulus was not child-specific, were identical in Boy and Girl booklets. An example of the former case is the picture of a boy stealing a football from a store. An example of the latter is a picture of a soldier with a rifle.

Items in varying stages of development and varying combinations were given to approximately 300 children in day care centers over a period of weeks. These children represented four ethnic groups: Oriental; Anglo; Mexican-American; and Negro. During this pretest phase the procedure was to administer items individually, ask the child how he felt, check his response (the face or picture to which he pointed) against his expression of feeling, and determine, by questioning, whether or not he understood what was "going on" in the item. Where it seemed that elements in the drawing were distracting from the concept, the items were redrawn and readministered. Items which despite revision were too difficult to be understood by at least 90 percent of a sizeable sample of children were rejected, as were items with insufficient variability in response (i. e., a choice split more eccentric than 90/10). The final instrument consisted of 60 items, 30 in the X format and 30 in the Y format. These were prepared in four booklets: (1) Girl X; (2) Girl Y; (3) Boy X; (4) Boy Y.

The test was then administered to 1320 children. The ethnic composition of the subsample of 996 selected for analysis was as follows: (a) 167 Mexican-Americans; (b) 250 Orientals; (c) 195 Anglos; (d) 216 Negroes; and (e) 168 Indians. Mexican-American children were obtained from an ethnically homogeneous school in an Oxnard, California, barrio. Indian children were tested on the Papago Reservation near Tucson, Arizona. Negro children came from the Compton school district near Los Angeles. Orientals and Anglos were intermingled in the Alhambra school district, also near Los Angeles. The total sample was almost evenly divided with respect to sex (496 boys and 500 girls). The grade composition was as follows: (a) 299 first-graders; (b) 341 second-graders; and (c) 356 third-graders.

Tests were administered in classes by project personnel with the occasional assistance of teachers, teacher aides, older children and, when required, translators. Individual attention to clarify the test task was seldom required except in first grade classes. The X booklet required, at most, one class period to complete. The Y booklet was easily completed in 20 minutes by all children.

Test results were analyzed in several ways. The major analysis was that which provided the underlying dimensions of the instrument. Since the items were designed to measure seven dimensions, data were subjected to principal axes factor analysis and seven factors were rotated to the varimax criterion. The solution was not satisfactory. A variety of other solutions were attempted with the result that the eight factor solution seemed most meaningful. The dimensions did not coincide with those hypothesized but were obviously those which best described the content of the test. The proportion of variance extracted was low (20%), a result attributable to the size of the sample (i.e., the larger the sample size, the smaller the number of factors and the smaller the proportion of common factor variance).

In the eight-factor solution, 23 items were lost (i.e., did not load above the acceptable level of .30 on any factor). The factors were named and described as follows:

Factor I. Social Conformity. Children scoring high on this dimension tend to choose to do the "proper" or expected thing rather than that which might be disapproved by adults. The non-conforming choice is not one that causes any damage but, rather, is something tempting to do that looks like fun but might be considered "naughty."

Factor II. Academic/Health. Children scoring high on this dimension enjoy activities related to school (studying; reading; being in class; the teacher) as well as practicing good habits of health (bathing and brushing teeth) and health personnel (doctor; nurse).

Factor III. Me First. This factor describes the child who wants to be active, dominant, and selfish rather than the reverse. He takes advantage of others to assert himself.

Factor IV. Masculinity. Typical of boys, the high-scoring child on this factor is not afraid of things (snakes; dark caves) and likes masculine activities (boxing; tug-of-war; whittling) and people (soldiers).

Factor V. Adult closeness. The child who scores high on this factor prefers to hug both "mother" and "father" rather than to be patted on the head by them.

Factor VI. Sociability. Children high on this factor choose many friends over one.

Factor VII. Aesthetic. This factor includes only items pertaining to sensory enjoyment (smelling flowers; watching clouds; listening to music).

Factor VIII. Asocial Behavior. The child scoring high on this factor likes such socially disapproved activities as littering, stealing, and defacing property. Unlike the Social Conformity factor, the activity is one that is to some degree harmful rather than just "naughty."

Although the eight-factor solutions for ethnic groups taken individually were not identical to the solution for the total sample of 996, there were sufficient commonalities to apply factor scores derived from the total group to the comparisons between ethnic subgroups. The major findings from these factor score comparisons were:

1. Orientals were the most socially conforming of all groups. Between other groups there was little difference on this factor except that Anglos were more conforming than Mexican-Americans.
2. Mexican-Americans exceeded Orientals and Anglos with respect to liking for things related to academic and health matters. Orientals, Negroes, and Indians also scored higher on this factor than did Anglos.
3. Indians distinguished themselves by being lower than any other group in dominance and selfishness when factor scores on Me First were compared.
4. Anglos were higher than Negroes and Orientals with respect to Masculinity factor scores.
5. Anglos were higher than Mexican-Americans, Orientals, and Negroes in Adult Closeness while Indians were lower than Mexican-Americans, Orientals, or Anglos on this factor.
6. Orientals and Anglos were higher than either Mexican-Americans or Indians with respect to Sociability.
7. Mexican-Americans were higher than any other group in their appreciation of beauty as measured by the Aesthetics factor. Orientals were higher than Negroes on this factor.
8. Orientals were lower than all other groups in their approval of Asocial Behavior. Mexican-Americans and Negroes were higher than Anglos in this respect.

When boys were compared with girls, the results were in the expected directions. Girls were higher than boys in Social Conformity, Academic/Health, Adult Closeness, and Sociability. Boys scored higher than girls in Me First and Masculinity. Interestingly, the sexes did not differ with respect to approval of Asocial Behavior.

Grade comparisons found age associated with increasing social conformity and decreasing approval of asocial behavior. There was a decrease in closeness to adults and in liking to be dominant and selfish, and an increase in masculinity. Liking for academic and health matters and sociability did not change with age. Second grade children seemed to like

aesthetic activities better than did first or third grade children.

When factor scores were intercorrelated, the correlations were very low although some were statistically significant. Social Conformity proved to be negatively related to Asocial Behavior ($-.19$) and to Me First ($-.14$) as well as to Masculinity ($-.09$). Sociability was positively related to Academic/Health ($.16$) and to Adult Closeness ($.11$). Adult Closeness was also slightly ($.10$) related to Me First. All other correlations were nonsignificant when the $.05$ level of probability was adopted.

In addition to the factor analysis and the tests for significance of differences between factor scores, item analyses were performed comparing sexes, grades, and ethnic groups. The results of these analyses were consistent with the factor score comparisons for those items which loaded on the factors identified.

When the results of these analyses were compared with results obtained by other investigators, there was general agreement with respect to most findings. However, there were some major surprises. Chief among these was the finding of high academic and health value in the Mexican-American and a lower academic/health value for Anglos than for all other groups. At the same time, the Mexican-American held higher values for asocial behavior and lower ones for social conformity, providing him with one set of values which might be expected to be prognostic of academic interest (if not success) and another set of values which is probably prognostic of conflict with those of teachers and school administrators. To a lesser degree, this was true of the Negro child. Children who have these two sets of values at young ages may well be highly motivated to learn but unwilling to be "socialized" in such a manner as to adapt to the discipline of the school. The finding that Anglos were low on the Academic/Health factor but relatively high on conformity and disapproval of asocial behavior suggests the possibility that it is these latter values which enable them to adjust to and progress in school despite lack of motivation. To draw such a conclusion, however, one would have to demonstrate that liking for academic activities is related to achievement.

Lest the reader assume from this report that children in particular ethnic groups are non-conforming or adopt asocial values, let it quickly be said that, in general, children in all groups disapproved things one "ought not" to do and approved those things which society encourages. The discussion pertains only to the relative degree of approval and disapproval when groups were compared.

Many interesting impressions were obtained in the course of the first year's project and a good deal of clinical "validation" of items was provided in conferences with teachers. Reception of the instrument was enthusiastic and teachers not only felt that they gained insight into their students, but, in at least one case, modified their treatment of a child to his benefit.

At the end of the first year of the development of the VIC it was evident that before the instrument could become operational, much work needed to be done. Therefore, a second year of development was proposed. This report describes the work performed in that second year.

CHAPTER TWO

INTRODUCTION TO THE SECOND YEAR

Objectives

At the time the proposal was prepared for the second year of research with the VIC, the project staff was not satisfied with the instrument as it then existed. Furthermore, no information was available with respect to the reliability or validity of the dimensions identified in that year. Therefore, one of the major objectives of this second year was to revise the Values Inventory for Children.

A second objective was to test differences between sexes, grade levels, and ethnic groups with respect to values using the results of retest and the results of the application of the revised instrument. As part of these comparisons, changes in values of the same children over an eight-month period of time were to be examined.

A third objective was to attempt to determine the reliability and validity of the original instrument once it was refined and the reliability of the new instrument once it was administered.

A fourth objective was to test hypotheses concerning the relationships between teacher-child value congruities and the child's adjustment to and achievement in school, as well as the relationships between congruity changes and criteria of adjustment and achievement.

A fifth objective was to relate child self-perceptions with respect to values to teachers' perceptions of children and to, in turn, relate differences to criteria of adjustment and achievement.

With respect to this last objective, it was proposed that the teacher would not only rate each child according to her perception of that child on the respective dimensions, but also according to the manner in which she thought the child perceived himself. The first ratings were to serve as criteria; the second as the basis for measures of disparities between child self-perceptions (measured in terms of factor scores on the dimension) and teacher-child perceptions on the same dimensions.

In the course of obtaining teacher ratings of children from their own point of view, it was found that the task was a very difficult one for the teacher. To ask them to repeat the same task in such a manner as to "second-guess" each child would have encountered great resistance, especially in terms of time spent on these tasks, and the results would probably be quite unreliable. Since this portion of the analysis was of minimal importance when compared with the task of relating teacher-pupil value disparities to criteria of academic achievement and school adjustment, a decision was made to eliminate teachers' perceptions of pupils' self-perceptions as a matter for concern.

It is very likely, in any event, that teachers' ratings of the child as seen by the teacher would be highly correlated with ratings of

child-self-perception. Furthermore, in their review of research on children's social perceptions, Dubin and Dubin (1965) came to the conclusion that "Adult inferences as data about children's perceptions can be abandoned because of their empirical uselessness and theoretical vacuousness (p. 818)."

The only other modifications to the originally proposed research were based on discoveries made after the proposal was submitted. For example, it had been hoped that health information would be available from schools and could be related to health scores. Such information was not available and, in the long run, would have been useless since health items were eliminated from the instrument. Another example is seen in the proposal to correlate self-esteem and achievement. Since no self-esteem factor emerged, this was an impossibility.

Another example of disparity between that proposed and that accomplished is seen in testing the hypothesis that teacher's values have a positive or negative effect on children's values and academic success. It was, of course, possible to establish a relationship between teachers' values and children's values and to relate these, in turn, to achievement. It was also possible to measure changes in congruities between teachers and children over the eight month test-retest period and to relate these to criteria of adjustment and achievement. It was not possible, however, to determine the direction of the causal arrow (Meehl, 1969). That is, one cannot state whether it is the teacher who affects the child, the child who affects the teacher, or whether there are other variables affecting both.

Any other modifications made to the original proposal consisted in finding better ways to meet objectives through more sophisticated or appropriate analysis techniques than those proposed. The manner in which objectives were met is the subject of this report.

Information Available

At the outset of the second year of research the following information was available:

1. Name, grade, sex, school, ethnic group, and teacher of each of 1320 children.
2. Item responses from the original 60-item Values Inventory for Children from each of 1320 children.
3. Results of factor analyses of items based on 996 children in five ethnic groups.
4. Results of comparisons between children of different sexes, grade levels (one, two, and three), and ethnic groups on the basis of responses to items and on the basis of factor scores derived from 996 children.

Information to be Obtained

The major information to be obtained in the second year consisted of:

1. Retest results from a subsample of the original children tested excluding Indians and using the original VIC.
2. Test results of teachers based on responses to the original VIC.
3. Ratings of children by teachers on both value dimensions and indices of school adjustment.
4. An index of achievement uniform for all children tested.
5. The relative importance of dimensions of value to teachers.
6. The results of administration of the revised VIC.

Measures to be Developed or Applied

1. A measure of teacher-child congruity of values.
2. A base-free measure of change for congruities and factor scores.
3. A measure of factor (dimension) reliability.
4. Correlations and t tests.

The manner in which the above information was obtained and the designated measures were devised or applied is described in Chapter III: Methods and Procedures. Chapter IV consists of a description of the procedures whereby the revised VIC was developed. Chapter V provides the results of the analyses of retest children. Chapter VI gives the results of analyses of fourth and fifth grade children from Spring Test. Chapter VII gives the results of analyses of the revised VIC. The discussion in Chapter VIII centers around the definition of the term "value" and attempts to integrate the research findings from this year of effort with those from the previous year as well as from those of other investigators. The final chapter, Chapter IX, provides a summary and recommendations. Appendices are referred to throughout the text and found at the end of the report.

The reader should take note before embarking on the task of absorbing all the material included in this report that his natural response to much of it will be "So what?" While it is true that a great deal of the data are open to question and thereby may seem "overanalyzed," it is also true that the function of any exploratory or developmental study is to generate ideas for more precise efforts. One reader may have specific interest in sex differences while another is concerned with maturation and still

another with ethnic differences. Some readers may consider the description of the manner in which items were developed overly detailed while others may find the same description quite useful in their own developmental work. Perhaps some reader will discover a tidbit of information that fits his or her as yet untested pet hypothesis; or it is possible that in piecing together the results of the study a scientist may arrive at an insight overlooked by the authors and proceed with a new avenue of research. For these reasons we have attempted to present a fairly thorough picture of our findings while eliminating, when possible, laborious tables of nonsignificant numbers.

CHAPTER THREE

METHODS AND PROCEDURES

As noted in the preceding chapter, there was a good deal of information available concerning the children tested in the first year of the development of the VIC (Fall, 1970). Information for this year of research was based on (a) original 1970 test results, (b) results of retest of a subsample of 1970 children tested again in the spring of 1971, (c) criterion and teacher test data collected in the Spring of 1971, and (d) Fall of 1971 testing of a new sample using the revised VIC.

While waiting for test results from Spring testing (to be described), project staff were not idle. A subsample of 1141 children was selected from the original total tested sample of 1320 by the process of eliminating Indians. Indians were not to be included in the second year of research because of the difficulty and expense involved in reaching them and also because their results from the first year, while interesting, showed little in the way of uniqueness of values. The elimination of Indians meant that not only were reservation Indians excluded, but so were a very few ($N=11$) scattered in Los Angeles area schools. The remaining group was a collection of Anglos, Orientals, Mexican-Americans, and Negroes plus a number of children not previously used in ethnic analyses because their ethnicity was difficult to determine (e.g., they were of mixed parentage or from some foreign country). The results of factor analyzing the responses of this sample of 1141 children appear in Chapter IV since they served as part of the basis for revising the instrument.

Spring Testing

Spring testing was carried out between April 27 and June 4 of 1971. The purpose of this testing was to evaluate the original VIC and to obtain retest results from a subsample of the older children tested in the Fall of 1970, eight months previously. In order to provide the reader with a more graphic idea of the samples of children involved in original testing (Fall, 1970) and Spring testing, Figure 1 provides a clearer picture. Each line represents the total tested in 1970 who were either in the predominant ethnic group in the schools tested or who were not ("Other"). The shaded portion of the line represents those who were retested in the Spring. Thus, in Oxnard, 167 Mexican-Americans were tested in 1970 and of these, 101 were retested in the Spring of 1971. In the same school, 54 non-Mexican-Americans were tested in 1970 and of these, 21 were still mixed in the classes with the Mexican-Americans and so were automatically tested in the Spring of 1971. Papago Indians were not retested.

In Alhambra the races are quite mixed so that it is possible here only to represent Anglos, Orientals, and a mixture of children who are neither. They are primarily Mexican-Americans. The Compton school district is predominantly Negro but has quite a few Mexican-American children and some Anglos.

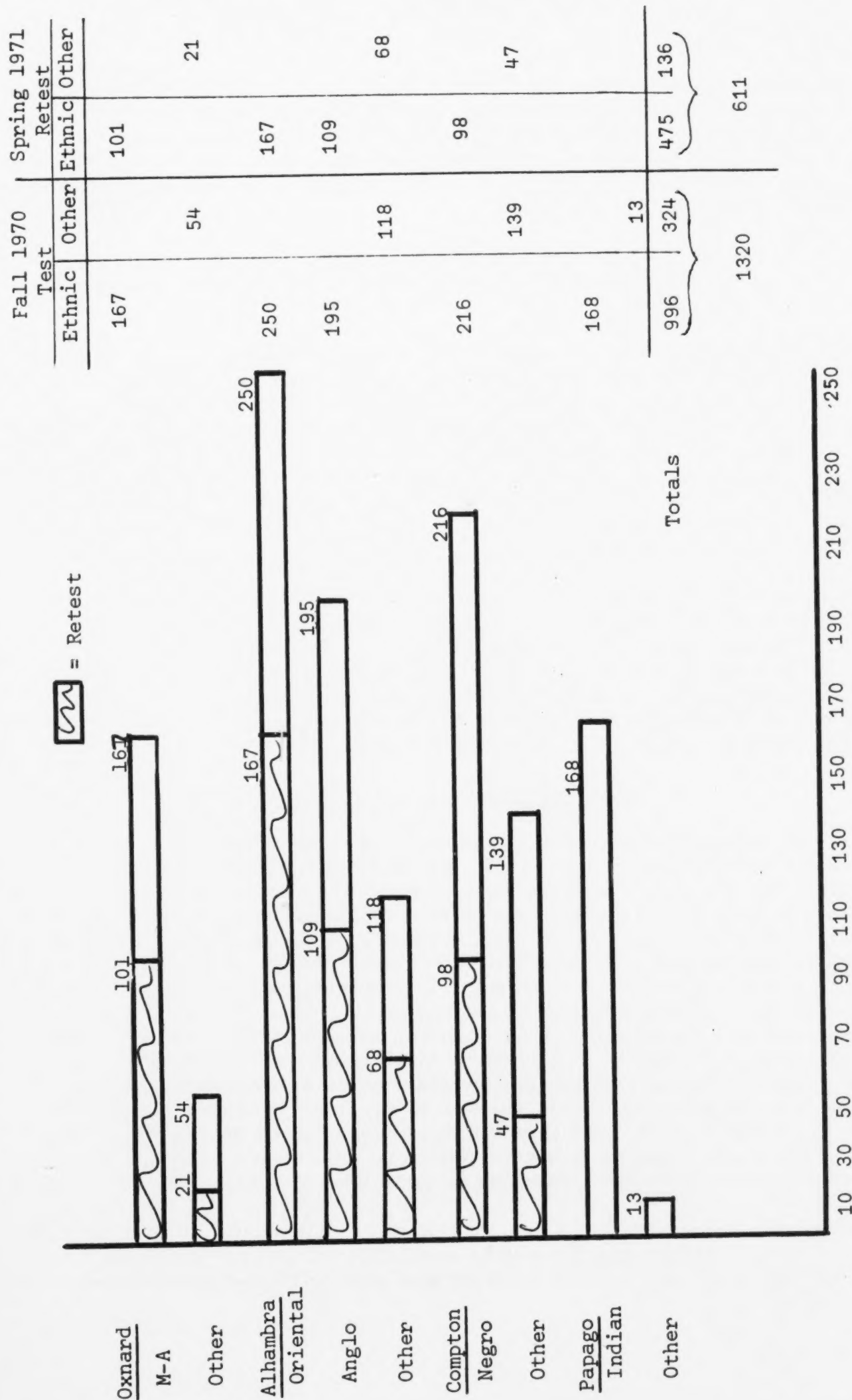


Figure 1 Fall 1970 Test Sample and Spring 1971 Retest Subsample by Ethnic Group

Analyses of Spring test results are based on all 611 retested children, regardless of ethnic extraction, except when it comes to ethnic group comparisons. There, the N becomes 475 since only those children attending the schools originally designated for their race and used in the 1970 analyses are eligible for analysis if comparisons are to be made with the previous year's results.

It is particularly important to note and remember that Anglos and Orientals, as defined here, are intermingled in the same schools, attend the same classes, and, of course, have the same teachers.

Figure 1 does not provide the total picture since in the course of gathering data, a number of new children appeared in classes and had to be tested. However, since there were no pretest results these children were eliminated from analyses. Also, there were 244 fourth grade children and 229 fifth grade children tested at this time so that their results might be compared with those of younger children. They are described in the section dealing with the analysis of their results. Breakdowns by sex and grade for the younger children are also given in conjunction with their analyses.

Those in the original sample who were not retested were either deliberately ignored because they were not needed or were lost because they had moved, were absent, etc. There was no need to retest all children to meet the objectives of this phase of the study. It has never been claimed that the original samples were "representative" of their races nor is it claimed that these subsamples are representative of the original samples from which they are drawn.

Other Spring Data Collection

At the same time as retesting of children took place, four other operations were performed. First, teachers took the VIC along with the children. Second, teachers of retest children (N=28) rated each of their children on 13 dimensions to be described later in the section headed "Rating Scales." Third, all teachers, including those of fourth and fifth grade (N=44), were asked to rank the dimensions of the VIC according to their importance to them in understanding children. The results of their rankings appear in Chapter IV. Fourth, project staff obtained reading scores for those children for whom they were available. One of the reasons retest required so much time was that in May there was a hiatus during which mandatory state-wide achievement testing was conducted in all schools. This worked to the benefit of this project because the achievement measures obtained were based on results of tests given at the same time as project staff were conducting retest. Thus, the achievement criterion coincides in time with the post-test predictors.

It was at this point that a problem arose. Although it was simple to obtain teacher ratings and they were available for every one of the 611 children retested, one school district was unable to provide reading scores.

For this reason reading scores are available for only 465 children. None are available for the Negro subgroup, all members of which attend school in that district.

Fall Testing

Fall testing was for the purpose of administering the revised VIC to entirely different samples of children in grades one through four in five new sets of schools. An attempt was made to balance schools with respect to socioeconomic status. New schools were selected from two of the districts used in the original testing: Alhambra and Compton. However, the original Alhambra schools used were of middle or upper-middle class status and children were predominantly Anglo and Oriental. The Alhambra schools used in this testing were of middle or lower-middle class status and well-integrated. The schools used in Compton also differed from those originally used. In addition, testing was done in Lynwood, Inglewood, and Paramount--districts all bordering Los Angeles and having mixtures of ethnic groups and a socioeconomic level that is middle or lower-middle class.

Fall testing was carried out between November 9 and December 14 of 1971. A description of the sample of children is seen in Table 1.

Table 1. Fall Test Sample N's by Grade and Ethnic Group

Grade	<u>Ethnic Group</u>			Total
	Anglo	Negro	Mexican-American	
1	114	54	109	277
2	108	60	118	286
3	127	73	108	308
4	<u>133</u>	<u>67</u>	<u>96</u>	<u>296</u>
Totals	482	254	431	1167

These children, then, were used in analyses pertaining to the revised VIC. Balance between grades is relatively even. There is a marked shortage of Negro children (and a slight overabundance of Anglos) but 256 is a sufficiently large N for analysis. Orientals were so few in number in these schools that they were not included.

Rating Scales

Criteria for validation of VIC items, factor scores, and teacher-child congruities (as well as changes in scores and congruities) were to consist of measures (a) relating to the factor dimensions, (b) indicative of school adjustment, and (c) of achievement. The only uniform criterion of achievement was a reading score since different school districts use various other measures but all districts are required to obtain measures of reading achievement at the same time each year using the same statewide measures. Reading scores are discussed in the next section.

When this research was originally proposed, the VIC contained eight dimensions as defined by factor analysis: (1) Sociability; (2) Academic/Health; (3) Closeness to Adults; (4) Asocial Behavior; (5) Aesthetic; (6) Social Conformity; (7) Masculinity; and (8) Me First (selfish, dominant values). For the purposes of developing rating scales for these factors the Academic/Health dimension was divided into (a) Academic Motivation and (b) Health Habits because it did not seem that a combination of the two would appear logical to the teacher.

In addition to ratings with respect to the dimensions measured, ratings were also obtained with respect to the teacher's estimate of (1) the pupil's academic ability (his potential for learning based on both intelligence test scores and response to learning tasks); (2) pupil's classroom behavior (as evidenced by conformity to classroom norms); (3) the pupil's relationships with other children in the class (the extent to which he is liked by others and gets along with them); and (4) the teacher's overall satisfaction with the child in all respects (intended as a measure of how well she likes him). All ratings were on a five-point scale. Ratings were made only for those 611 children being retested.

The scales were prepared by attaching a computer printout of the names of the children in each class next to each scale. If the child was no longer in the class, his name was crossed out and the teacher did not rate him. A copy of a typical set of scales, in which names have been changed, appears in Appendix A.

For the sake of teachers' ease in using rating scales, dimensions were reversed so that the higher the child rated, the lower was his number on the scale. Only in the case of Classroom Behavior was the highest value assigned to the "best" behavior. Therefore, in analyses of relationships between ratings and other dimensions, we have taken the liberty of reversing the signs so that the true relationship is evident. In cases where ratings are compared by *t* tests, the direction of the difference is made explicit since in most cases a higher mean indicates a lower rating.

Unfortunately, it is impossible to compute the reliability of teacher ratings since each teacher rated her own students only once (at the time of posttest). Although it is possible to identify rating errors by a two-way (ratee x trait) analysis of variance, adjustment for errors (e.g., halo effect, logical error, error of central tendency, proximity errors) is impractical in this case. As Guilford (1954) points out, when only one rater rates a group, his errors are confined to this group and "There is no simple,

generally applicable solution to this problem" (p. 289). He goes on to say that "If one is willing to make assumptions concerning comparability of subgroups of ratees, one extends the possibility of making inferences about the amounts of errors of different kinds" (p. 289). In this case, however, it is impossible to assume that the classes rated are comparable and there is, indeed, evidence that they are not. Ratings made by teachers in some schools had sufficient spread (variability) to indicate perceived differences between children with respect to all (or most) characteristics rated. In other schools, there was little variability because of the nature of the children, who were homogeneous with respect to a large number of characteristics.

The means and standard deviations of the 13 ratings are given in Table 2. With the exception of Classroom Behavior, the lower the mean, the higher the rating.

Table 2. Means and Standard Deviations of Ratings of Retest Children (N=611)

<u>Rating Scale</u>	<u>M</u>	<u>SD</u>
Sociability	2.26	1.15
Health Habits	1.66	1.07
Academic Motivation	2.18	1.15
Closeness to Adults	3.04	1.25
Asocial Behavior	3.87	1.25
Aesthetic	2.46	1.17
Social Conformity	1.90	1.04
Masculinity-Femininity	3.04	1.50
Me First	3.37	1.27
Academic Ability	2.68	1.11
Classroom Behavior	3.70	1.27
Peer Relations	2.06	1.10
Satisfactoriness	1.77	.99

With an expected average rating of 3.0, it can be seen that children are rated higher in the "desirable" characteristics (Sociability, Health Habits, Academic Motivation, Aesthetic, Social Conformity, Academic Ability, Classroom Behavior, and Satisfactoriness) and lower in the "undesirable" characteristics (Asocial Behavior and Me First). The rating of Masculinity-Femininity is, as expected, close to 3.0 since girls were almost uniformly rated feminine and boys, masculine.

The distributions of these ratings appear in Table 3. As can be seen, it is a rare child who does not get along with peers, is disruptive in class, is unsatisfactory, or is seen as low in sociability, health habits, academic motivation, aesthetics, conformity, or ability or as high in asocial behavior. Nevertheless, teachers have generally spread their ratings rather evenly across at least three categories and the degree of skewness is not prohibitive for analysis.

Table 3. Distributions of Ratings of Retest Children by Percent in Each Category ($N=611$)

Rating	P ₁	P ₂	P ₃	P ₄	P ₅
Sociability	32	25	25	12	6
Health Habits	61	19	8	5	6
Academic Motivation	35	26	25	8	6
Adult Closeness	18	18	26	19	19
Asocial Behavior	6	9	20	20	45
Aesthetics	28	21	32	14	5
Social Conformity	43	29	17	6	5
Masculinity	22	18	19	15	26
Me First	15	12	24	20	29
Academic Ability	16	27	36	14	7
Classroom Behavior	7	11	23	23	36
Peer Relations	41	25	24	8	2
Satisfactoriness	53	24	17	4	2

Intercorrelations between ratings for the entire retest sample are given in Table 4. It is quite obvious that there are high relationships between ratings on most dimensions and those on other dimensions.

Table 4. Intercorrelations of Teachers' Ratings (N=611)

	Soc.	Hlth.	Ac.Mt.	A.C.	A.B.	Aes.	S.C.	Masc.	Me 1st Abil.	Cl.Beh.	Peer Satisf.
Sociability	---	<u>.286</u>	<u>.333</u>	<u>.187</u>	<u>.035</u>	<u>.106</u>	<u>.066</u>	<u>.027</u>	<u>.097</u>	<u>-.049</u>	<u>.302</u>
Health Habits		----	<u>.484</u>	<u>.065</u>	<u>-.277</u>	<u>-.060</u>	<u>.339</u>	<u>-.113</u>	<u>-.084</u>	<u>.206</u>	<u>.297</u>
Academic Motivation			----	<u>.182</u>	<u>-.285</u>	<u>.102</u>	<u>.467</u>	<u>-.130</u>	<u>-.113</u>	<u>.381</u>	<u>.437</u>
Adult Closeness				----	<u>.064</u>	<u>.283</u>	<u>.069</u>	<u>-.244</u>	<u>.058</u>	<u>.081</u>	<u>.046</u>
Asocial Behavior				----	----	<u>-.007</u>	<u>-.570</u>	<u>.258</u>	<u>.531</u>	<u>-.571</u>	<u>-.344</u>
Aesthetic					----	<u>.002</u>	<u>-.030</u>	<u>.006</u>	<u>.144</u>	<u>.090</u>	<u>.139</u>
Social Conformity					----	----	<u>.261</u>	<u>-.458</u>	<u>.300</u>	<u>.662</u>	<u>.527</u>
Masculinity						----	----	<u>.256</u>	<u>-.102</u>	<u>-.354</u>	<u>-.066</u>
Me First							----	----	<u>.063</u>	<u>-.562</u>	<u>-.295</u>
Ability								----	----	<u>.288</u>	<u>.311</u>
Classroom Behavior									----	----	<u>.461</u>
Peer Relations										----	<u>.622</u>
Satisfactoriness											----

r = .083; p < .05

r = .108; p < .01

All r's significant at the .05 level or better are underlined

The extent to which there is "halo effect" might be partially inferred from the relative size of the correlations between ratings of Satisfactoriness and ratings of other dimensions. The ratings most highly related to this measure of "liking" for the child are Classroom Behavior, Peer Relationships, and Social Conformity--all in the positive direction. One cannot conclude that the "liked" child is rated higher in other characteristics than is the "unliked" just because he is liked, however. It is more likely that the reverse is true and that the child who behaves well in class, gets along well with classmates, and conforms will be most satisfactory to his teacher. To a lesser extent this can also be said of the child rated high in Academic Motivation and Ability and low in Asocial Behavior and Me First.

To attempt to identify the dimensions underlying these ratings, the matrix of their intercorrelations was factor analyzed. The three-factor solution was the most reasonable. The results are shown in Table 5 below.

Table 5. Three-factor Solution for Intercorrelations of Ratings with Loadings .30 or Greater (N=611)

Factor	Rating	Loading	Factor	Rating	Loading
I	Classroom Behavior	.85	II	Academic	
	Social Conformity	.73		Motivation	.77
	Me First	-.70		Health	.58
	Asocial Behavior	-.68		Academic Ability	.57
	Satisfactoriness	.62		Sociability	.49
	Peer Relations	.45		Peer Relations	.47
	Masculinity	-.35		Social Conformity	.38
III	Aesthetics	.57		Satisfactoriness	.37
	Adult Closeness	.46			

No attempt was made to name these factors but the interpretation is that Factor I represents a tendency to rate high the kind of child who is "well-behaved" (more often a girl than a boy), while Factor II represents a tendency to rate high the child who both does well academically and gets along well with other children. Factor III is composed of the two ratings that seem to have little to do with most other variables in the study and are more or less irrelevant to the teacher in evaluating her students.

Reading Scores

At the outset of this year of research it was proposed that a uniform measure of achievement be developed which would be applicable to all schools in which subjects were tested. In all California schools, first and second grade children are given the Cooperative Primary Reading test. Third grade children are given the Stanford Achievement Tests of Reading and Reading Comprehension. Scores were available from the May, 1971, statewide administration of these tests which also coincided closely with the Spring testing of this project.

Aside from these tests, assessment methods of student progress vary between school districts with some simply holding parent-teacher conferences and no grades being assigned while others use conventional letter grades. The only uniform measures, therefore, were those derived from standardized reading tests and these had to suffice as indices of student achievement.

Reading scores are provided in grade equivalents. By May, children are sufficiently well along in the school year that if they are to be at the state level in reading, their reading score should be their grade plus .7. In other words, the "average" first-grader should have a reading score of 1.7; that for second grade should be 2.7; etc. As previously stated, a serious problem arose when the investigators sought to obtain reading scores from the predominantly Negro school district. This, effectively, made it impossible to compare the original Negro subgroup with the other three ethnic groups with respect to this criterion.

The mean reading score for the entire group of 465 was 2.87 with a standard deviation of 1.22. This is somewhat higher than the expected 2.7 and examination of the differences between districts (not published) suggests that it is due to the district in which Anglos and Orientals of middle- and upper-middle classes reside. The Mexican-American district was somewhat below average, undoubtedly due in large part to the language problems inherent in living in a relatively homogeneous community where many of the residents have never learned to speak English.

When it came to attempting to relate reading scores to other variables it was obvious that since the score for a third-grader will be higher (on the average) than that for a second-grader and the second-grader will, in turn, score higher than the first-grader, a conversion was required so that the relationships would reflect achievement relative to age rather than both achievement and age. Consequently, the simple expedient of determining the difference between each child's score and the score expected for his grade and using that difference was adopted. This does not, of course, take into consideration a given child's relationship to his class or school (and there are profound differences between classes and schools), but it seems an acceptable procedure. Thus, for every child the grade level reading score was differentiated from his grade level (1.7, 2.7, or 3.7) and if he was below level, his score was negative while if he was above, it was positive.

Reading Scores and Rating Scales

Table 6 shows the results of correlating each of the rating criteria with the achievement criterion.

Table 6. Intercorrelations of Ratings and Reading Scores (N=465)

<u>Rating</u>	<u>r</u>	<u>p</u>
Sociability	.076	ns
Health Habits	.166	<.01
Academic Motivation	.239	<.01
Adult Closeness	-.054	ns
Asocial Behavior	-.265	<.01
Aesthetics	.007	ns
Social Conformity	.349	<.01
Masculinity	-.084	ns
Me First	-.219	<.01
Academic Ability	.417	<.01
Classroom Behavior	.363	<.01
Peer Relations	.347	<.01
Satisfactoriness	.328	<.01

r=.093; p<.05

r=.122; p<.01

Achievement of the child in terms of his ability to read is, not unexpectedly, most significantly related to the teacher's rating of his academic ability. The achieving child is also rated higher on good classroom behavior, good peer relations, social conformity, satisfactoriness, and academic motivation than is the nonachieving child. The non-achieving child is rated higher in asocial behavior and qualities of dominance and selfishness. The relationship between reading scores and health habits is also positive and significant.

As has been the experience in many analyses, ratings of sociability, aesthetics, and adult closeness do not bear significant relationships to the variable in question. Interestingly, rating of masculinity is not correlated with reading, a finding that supports the lack of difference between sexes with respect to achievement (see Sex Differences in Chapter V).

Factor Scores

The factor scores used in analyses of the 611 retest children were those derived from factor analyses of the 30 retained items on pretest and posttest. These solutions, while not identical, were very similar in structure. They appear in Table 7. Only those items loading .30 or higher on a factor are listed. It should be noted that no items were lost in either solution; that is, all items loaded at least .30 on some factor.

The factors derived from analyses eliminating the 30 unwanted items were much more clearcut than were those from the original 60-item form and the structure remained essentially the same for pretest.

The important thing to note concerning the posttest factor structure is that items originally loading on Social Conformity are beginning to shift toward the Asocial factor. As an aside, we say "beginning" to shift because in an analysis of the results of the responses of delinquent and nondelinquent teenagers and pre-teens this shift became more pronounced and the composition of the final factor (one which also included items not in the VIC), was such that it was labeled "Sociopathic." A description of that study appears in Appendix J of this report.

Intercorrelations of pretest factor scores appear in Table 8 while intercorrelations of posttest factor scores are provided in Table 9. The results show that while some of the dimensions have statistically significant relationships, most are quite independent.

In both pre- and posttest, factor scores for Masculinity are positively related to those for Asocial and factor scores for Social Conformity are negatively related to the Asocial dimension. Similarly, Me First is negatively related to Social Conformity in both pre- and posttest and positively related to Asocial in posttest. Social Conformity and Adult Closeness are positively related in both pre- and posttest. The negative relationship between Adult Closeness and Masculinity in pretest does not remain significant in posttest while liking for Academic things becomes negatively related to Asocial in posttest. Social Conformity and Academic are positively related in pretest and the relationship increases in posttest.

Means and standard deviations of factor scores are not given since factor scores all have means of zero and standard deviations approaching unity (actually, ranging from .71 to .82), as expected.

The next analysis involved the intercorrelation of pretest and posttest factor scores. The results appear in Table 10. The diagonal entries in the matrix may be considered as eight-month retest reliabilities of factors although they are confounded by both subject instability and factorial instability. They are, as expected, significant but low since they are based on two different factor structures and two different points in time. If it were not for the fact that Adult Closeness had only two items loading above .30, it might be assumed that Sociability, also with two items, was unreliable because of its length. However, the retest "reliability" of Adult Closeness is .441.

Table 7. Orthogonal Seven-Factor Solutions for Pre- and Posttest with Loadings of .30 or Greater ($N = 611$).

<u>Factor I</u> <u>Me First</u>	<u>Pretest</u> <u>Loading</u>	<u>Posttest</u> <u>Loading</u>	<u>Factor II</u> <u>Masculinity</u>	<u>Pretest</u> <u>Loading</u>	<u>Posttest</u> <u>Loading</u>
Push/ <u>swing</u>	.58	.60	Cave	.45	.48
Eat/ <u>share</u>	-.54	-.53	Knife	.45	.39
Watch/ <u>play</u>	.51	.60	Soldier	.43	.46
1st/ <u>3rd</u>	-.48	-.62	Boxing	.38	.49
Student/ <u>teacher</u>	.47	.60	Snake	.38	.49
Small/ <u>large</u>	.37	.48	Ghosts	.36	.49
			Tug-of-war	.32	.44
<u>Factor III</u> <u>Asocial</u>			<u>Factor IV</u> <u>Academic</u>		
Littering	.65	.66	Studying	.55	.53
Stealing	.53	.49	Classroom	.53	.56
Water man	.46	.52	Teacher	.42	.50
Fence	.38	.57	Reading	.41	.32
Smoke/ <u>not</u>		-.34			
Listen/ <u>talk</u>		.33			
Eat/ <u>share</u>		-.32			
Duty/ <u>play</u>		.31			
<u>Factor V</u> <u>Adult Closeness</u>			<u>Factor VI</u> <u>Sociability</u>		
Hug/ <u>pat</u> -Mother	-.64	-.67	Play 1/ <u>many</u>	.61	.46
Pat/ <u>hug</u> -Father	.60	.71	Talk 1/ <u>many</u>	.52	.62
<u>Factor VII</u> <u>Social Conformity</u>					
Listen/ <u>talk</u>	-.58	-.49			
Sleep/ <u>talk</u>	-.48	-.32			
Bed/ <u>up</u>	-.42	-.58			
Duty/ <u>play</u>	-.39	-.44			
Smoke/ <u>not</u>	.35				

Table 8. Intercorrelations of Pretest Factor Scores ($N=611$)

	Me 1st	Mascu.	Asocial	Acad.	Ad.Cl.	Soc.	S. Conf.
Me First	---	.062	.040	-.039	.052	-.038	-.120**
Masculinity		---	.155**	.029	-.095*	-.037	-.046
Asocial			---	-.069	.061	-.017	-.218**
Academic				---	.011	.026	.086*
Adult Closeness					---	.045	.022
Sociability						---	-.019
Social Conformity							---

* $r=.083$; $p<.05$

** $r=.108$; $p<.01$

Table 9. Intercorrelations of Posttest Factor Scores ($N=611$)

	Me 1st	Mascu.	Asocial	Acad.	Ad.Cl.	Soc.	S. Conf.
Me First	---	.021	.091*	-.011	.039	-.074	-.100*
Masculinity		---	.105*	-.009	-.070	-.012	-.034
Asocial			---	-.091*	.029	-.003	-.187**
Academic				---	-.014	.042	.135**
Adult Closeness					---	.081	.023
Sociability						---	.001
Social Conformity							---

* $r=.083$; $p<.05$

** $r=.108$; $p<.01$

Table 10. Intercorrelations of Pretest and Posttest Factor Scores (N=611)

Posttest	Me First	Masculinity	Asocial	Academic	Adult Closeness	Sociability	Soc. Conformity
Me First	<u>.482**</u>	.060	.116**	-.049	.090*	-.134**	-.174**
Masculinity	.027	<u>.451**</u>	.010	-.018	-.065	-.002	-.067
Asocial	.074	.093*	<u>.462**</u>	-.038	.060	.002	-.364**
Academic	.023	-.033	-.064	<u>.395**</u>	-.089*	.047	.119**
Adult Closeness	.041	-.069	.029	.015	<u>.441**</u>	.051	-.012
Sociability	-.075	-.052	-.107*	.007	.145**	<u>.228**</u>	-.048
Social Conformity	-.127**	-.048	-.152**	.082	-.052	.016	<u>.293**</u>

*r = .083; p = .05

**r = .108; p = .01

Columns of this matrix represent relationships between factor scores from pretest and those from posttest. Rows represent the reverse. Thus, if a child is high in Social Conformity on pretest, he will tend to score low on Me First and Asocial and high on Academic and Social Conformity on posttest. If a child is high in Social Conformity on posttest, he will have tended to score low on Me First and Asocial and high on Social Conformity on pretest. These correlations represent relationships between different sets of factor scores at different times while those in Tables 8 and 9 represent relationships between the same factor scores at the same time. For this reason the matrix is not symmetric.

Once again, however, the reader should note the relative independence of the factors pre- and posttest.

Measures of Teacher-Child Congruity

Since a number of hypotheses to be tested in this project involved the relationship between the child and his teacher with respect to values and the relationship between a teacher and her class with respect to the same values, a measure of teacher-child value congruity was required. This measure was to be based upon the commonality between the child's responses to VIC items and the child's teacher's responses to the same items.

The reader is reminded at this point that the teacher took the VIC only once--at the time that children were undergoing retesting (posttest). The assumption has been that the teacher will not have changed in her values in eight months but that the children will have. Therefore, when we discuss "pretest teacher-child congruities" we are talking about the correlation between the child's pretest responses and the one set of responses provided by the teacher. "Posttest teacher-child congruities" are, obviously, correlations between the child's posttest responses and the same set of responses made by the teacher.

At this junction it would be dishonest to refrain from informing the reader that the assumption of teacher value stability, while having support in the literature (e.g., Gorsuch, 1971; Henighan, 1971), may be an untenable one for teachers new to the school. Discussions with new teachers (of which there are only two) have revealed that changes in their values have occurred as a function of interaction with their pupils. In other words, contrary to the assumption that children will change in the direction of the teacher with respect to values, some teachers have changed in the direction of the children. As an example, one teacher who entered a school where the children were of a different cultural background than hers found her negative values with respect to violence (based on her Quaker upbringing) changing to the positive values evidenced by members of the predominant ethnic group in her class. As she said, "I don't rely completely on gentle reasoning any more. When I have to, I hit." Needless to say in such cases increasing congruity may be a function of child change, teacher change, or both. There is no way to determine the source.

Three measures were explored. The first was a Fisher's Z transformation of the Pearson r approximation. Normalization of r 's was necessary since congruencies were to be correlated with other variables. The second was the G coefficient (Holley & Guilford, 1964; Lienert, 1971; Sjoberg & Holley, 1967), an index successfully used by Guilford (1967) to correlate item responses of persons for Q analysis. G is computable by the formula $G = 2pc - 1$ where pc represents the proportion of agreements (i. e., items answered in common by two persons). It is a probability measure rather than a true correlation and is equivalent to ϕ only when marginal cells are .5. The third measure, suggested by J. P. Guilford, was the angle of agreement between responses to all items which is calculated by determining the percentage of agreement and converting to $\arcsin\sqrt{P/100}$ where P is the percentage of agreement. The arcsin transformation has a normalizing function.

All three of these statistics were computed for every teacher-child pair and compiled (averaged within class) for teacher-class measures. It was then decided that an intercorrelation of all measures on both pre- and posttest should be performed to determine the extent to which they overlapped. The results appear in Table 11.

Table 11. Intercorrelations of Three Teacher-Child Congruity Measures on Pre- and Posttest (N=611)

	Angle Pre	$\underline{Z}$ Pre	$\underline{G}$ Pre	Angle Post	$\underline{Z}$ Post	$\underline{G}$ Post
Angle Pretest	---	.899*	.999*	.542*	.496*	.539*
$\underline{Z}$ Pretest		---	.890*	.474*	.497*	.472*
$\underline{G}$ Pretest			---	.539*	.493*	.536*
Angle Posttest				---	.915*	.999*
$\underline{Z}$ Posttest					---	.918*
$\underline{G}$ Posttest						---

* $r = .108$; $p < .01$

As can be seen from Table 11, Angles and $\underline{G}$'s are virtually identical, a result to be expected when it is understood that they are both derived from proportions and that $\underline{G}$'s are normally distributed. $\underline{Z}$'s, being normalized product-moment relationships, do not bear as strong a relationship to Angles and $\underline{G}$'s as these measures do to one another. Since Angles and $\underline{G}$'s were identical, and since $\underline{G}$'s more closely resembled "correlations" in the sense that they range from a theoretical -1.0 to +1.0 while Angles can range from 0 to 100, it was decided to eliminate Angles from further analyses.

A large number of analyses were then run (e.g., t ratios for differences between groups; correlations of congruities with other variables) to determine which of the two remaining measures provided the most information. Results of these analyses were almost identical but in those cases where they were not, Z transforms of r 's proved to be superior in identifying differences and establishing relationships. For this reason, and to save the reader from confusion, only Z 's are reported in analyses of congruities.

Means and standard deviations for Z scores were as follows:
(1) Pretest $M=.261$; $\sigma=.263$; (2) Posttest $\bar{M}=.295$; $\sigma=.278$.

Base-Free Measures of Change

Teacher-Child Congruity Changes

It was hypothesized at the beginning of this project that: (1) the more like his teacher a child became, the more he would achieve; (2) the more like his teacher a child became, the better would be his adjustment to school; and (3) children would become more like their teacher over the eight-month period between pre- and posttest.

In order to test these hypotheses it was necessary to develop a measure of teacher-child congruity change. There are two problems connected with measuring change. The first is that a child will change simply as a function of maturing (i.e., increasing socialization of values) and if the teacher can be presumed to be socialized, he can be expected to become more like her. There is no way to partial out maturational changes. The second problem is that the more like a teacher a child is to start, the less room he has to move in her direction with respect to congruity. Conversely, the less like her he is, the greater his potential for change in her direction. What is needed is a base-free measure of change--that is, one that takes into consideration the original differential between child and teacher.

Tucker, Damarin, and Messick (1966) developed a base-free measure of change that was not directly applicable because they employed the reliability of their original measure (in their case, a test) in their computation. The method used in this project, suggested by Budnoff (1971), was to obtain a predicted posttest value by correlating pretest congruities with posttest congruities and multiplying the ratio of the standard deviation of the posttest distribution to that of the pretest to obtain the estimated regression coefficient, and then to use this regression coefficient to find the predicted posttest values. The change score, then, is the difference between the actual posttest value and the predicted value. If the actual value is higher than the predicted value, its sign will be positive; if lower, its sign will be negative. This method provides an observed rather than "true" score as in Tucker, Damarin, and Messick but the scores so obtained would be perfectly correlated with those that would be derived by application of their method, despite the difference in means.

For teacher-child congruity change scores, the results were as follows. The mean pretest congruity ($N=611$) was .261. Posttest mean

congruity was .295. The gross difference between these is .034. The predicted mean posttest scores was .287. The difference between the actual posttest score and the predicted posttest score is .008, a change in the direction of greater congruity over and above that predicted on the basis of the regression of posttest congruities on pretest congruities.

Factor Score Changes

The same method was used to obtain predicted factor scores on the basis of pretest factor scores to provide a base-free measure of the extent to which children change in values. The results are, of course, contaminated by the fact that posttest factor scores are not derived from precisely the same factor structure as are pretest factor scores, but the effect is believed to be negligible.

Table 12 shows the pre- and posttest mean factor scores by factor with gross differences, predicted scores, and change scores.

Table 12. Mean Pretest, Posttest, Difference, Predicted, and Change Scores for Each Factor Dimension (N=611)

<u>Factor</u>	<u>Pretest</u>	<u>Posttest</u>	<u>Difference</u>	<u>Predicted</u>	<u>Change</u>
Me First	-.039	-.065	-.026	-.020	-.045
Masculinity	.008	.042	.034	.004	.038
Asocial	-.056	-.046	-.010	-.027	-.019
Academic	.004	.015	.011	.002	.013
Adult Closeness	-.029	.001	.030	-.014	.015
Sociability	.011	.014	.003	.003	.011
Social Conformity	.039	.024	-.015	.011	.013

In interpreting these results for the entire retest sample, it is seen that children became higher in values of Masculinity, Academic, Adult Closeness, Sociability, and Social Conformity and lower in values of Me First and Asocial. Most of these changes are in the direction of increasing socialization. The exception is Masculinity which increased. Adult Closeness was predicted to remain negative in posttest but shifted in the opposite direction.

When predicted factor scores are correlated with pretest factor scores, the matrix is identical to that obtained from intercorrelation of pretest factor scores since predicted scores are based on pretest scores. When predicted factor scores are correlated with posttest factor scores, the diagonals of the non-symmetric matrix are identical to those obtained by correlating pretest factor scores and posttest factor scores but the off-diagonals differ as a function of the regression of posttest on pretest.

Table 13 shows the intercorrelations of factor score change scores for the entire retest sample.

Table 13. Intercorrelations of Factor Score Change Scores (N=611)

	Me First	Masc.	Asoc.	Acad.	Ad.Cl.	Soc.	Soc.Conf.
Me First	----	-.008	.014	-.013	-.012	-.013	-.006
Masculinity		----	.114**	.022	-.036	.009	.002
Asocial			----	-.072	.002	.052	-.047
Academic				----	.026	.035	.089*
Adult Closeness					----	.012	.061
Sociability						----	.011
Social Conformity							----

* $r = .083$; $p < .05$

** $r = .108$; $p < .01$

Only two of these correlations attain significance beyond the .05 level. The child who changes in the direction of greater Masculinity also changes in the direction of higher Asocial values (and vice versa). The child who changes in the direction of higher Academic values also changes in the direction of higher Social Conformity values, and vice versa, but the relationships are very low.

Factor Reliability Measure

As Cronbach (1951) states: "Any research based on measurement must be concerned with the accuracy or dependability, or, as we usually call it, reliability of measurement (p. 297)." This quotation is contained in his article describing the alpha coefficient which, as he demonstrates, is a special case of the Kuder-Richardson coefficient of equivalence and is the mean of all split-half correlations resulting from different splittings of a test. Although he claims that alpha is a good measure of common-factor concentration for tests of reasonable length, in the case of the data at hand it is applied to each factor individually rather than to the composite VIC. Alpha represents a conservative estimate of reliability and is identical to KR-20 if all items are scored 1 or 0. Its formula is:

$$\alpha = \frac{n}{n-1} \left(1 - \frac{V_i}{V_t} \right)$$

Where: V_t = the variance of the test (factor) scores

V_i = the variance of the item scores after weighting

Correlations and t Ratios

The major portion of the analyses performed in this study consisted in computations of Pearson r approximations when relationships were sought and t ratios when comparisons were made between groups. A word of caution with respect to results and "conclusions" drawn from them is in order.

First, no inferences have been drawn unless the significance level of the test is .05 or better. In the case of correlations, probability levels were derived from tables of probabilities and significance levels were based, in each case, on the appropriate N . In the case of t tests, probability levels were provided by the computer to the third decimal and reported as recorded in computer output.

Second, when large groups are compared, the probability of their being exactly the same on any scale is small and a statistically significant difference does not necessarily mean an important difference. On the other hand, the lower the reliability of scores, the lower the t ratio will be for the same true mean difference so that a low t may mean either no difference or a considerable true difference obscured by a large error variance. The differences reported here must be viewed not so much with respect to their size or relative significance as with respect to their meaningfulness (i.e., logical consistency with known facts).

We would like to provide a further note on the choice of t tests for determining the significance of the differences between means. In the previous year's work, chi-squares were computed when it seemed that the assumptions underlying t (and F) tests might be violated. At the same time, t tests were also applied to the same data to see whether the results were the same (i.e., both were either significant or non-significant). In most cases results were consistent but in a few they were in profound disagreement in that the directions of differences reversed themselves. In other words, while the mean for group A might be significantly higher than for group B, the proportion in group B might be greater than that in A. Since that time Boneau's (1960) arguments for the use of parametric (e.g., t tests) rather than nonparametric (e.g., chi-squares) methods, on the basis that violation of assumptions has little effect on either t or F , has come to the attention of the investigators. In addition, it is quite likely that the explanation for conflicting results using t and chi-square is that, as Boneau says, "A combination of unequal sample sizes and unequal variances... automatically produces inaccurate probability statements which can be quite different from the nominal values (p.62)". Finally, in this study, violations of assumptions (normality and homogeneity of variance) do not often occur.

With respect to relationships as evidenced in correlations, it must also be said that there are two ways of looking at them, just as there were two ways of regarding statistically significant differences. Here, too,

there is evidence in some cases that assumptions have been violated in the application of Pearson r , particularly in cases where ratings are markedly skewed. However, the effect of violation of assumptions is to reduce the resulting r by some amount and thus r 's are underestimates. Most variables (i.e., factor scores, teacher-child congruities, factor score changes, congruity changes, reading scores, and some of the ratings) are normally distributed. There is no indication, in any case, that relationships between variables are curvilinear and hence no need to compute η coefficients. In view of the limitations of the data, particularly the questionable reliability of ratings, one can assume that a statistically significant relationship is, indeed, significant. On the other hand, most relationships are quite small. Again, it is their logical consistency that suggests their practical value.

Where multiple correlations are used, the method is that of stepwise multiple regression. This technique proceeds by examining the zero-order correlation of each of the predictor variables with the criterion variable. It enters the predictor variable with the highest correlation with the criterion, computes the predictor-criterion correlation for the remaining predictors with the predictor(s) already partialled out and enters the predictor with the highest partial correlation. This procedure continues until the addition of another predictor variable to the equation no longer significantly increases the multiple R . It allows the investigator to determine which of the predictors contribute significantly to prediction and which do not. As a practical matter, R 's are presented only to the point where an increase equal to or less than .001 occurs although in some cases additional variables may contribute "significantly" to the equation.

The reader must keep in mind at all times that this project was designed (a) to improve an existing measure of values and (b) to explore possible relationships between values and other variables (adjustment to school; achievement in school; congruities with teacher; sex; ethnic group; grade level). The purist might question the failure on the part of the investigators to equate (either experimentally or statistically) for such factors as socioeconomic status, teacher/pupil ratio, ethnic mix of peers, race or sex of teacher, etc. In the first place, the study is, as stated, exploratory. In the second place, one must obtain subjects where one can find them and the real world does not control for such variables. These are what Meehl (1969) calls "nuisance-variables" and he very cogently points out that not only may it be impossible to control for them but, in many cases, it may be undesirable to do so.

Despite the limitations in the data, the reader will find such statements as: "The more alike the teacher and child in values, the greater will be the child's achievement.", or "Mexican-American children are more asocial than are Oriental children." In the former case the correlation may be on the order of .18; in the latter the t ratio may be significant at the .02 level. It is the responsibility of the reader to examine the tables (where provided) to determine the magnitude of the relationship or difference and draw his own conclusions. Such statements are not meant to be generalized to other samples nor to an extent greater than the data warrant. They simply save the writer from reiterating qualifiers such as "In the case of this sample of ... it would seem that, to a slight extent, ..." or "There is a tendency toward..."

CHAPTER FOUR

REVISION OF THE VALUES INVENTORY FOR CHILDREN

In accomplishing the revision of the VIC decisions had to be made with respect to : (1) items to retain and items to eliminate; (2) dimensions to retain or eliminate; (3) dimensions to expand by the addition of new items designed to measure them; (4) which of the newly created items to retain for the final instrument; (5) possible changes in procedures for administration of the instrument; and (6) possible changes in the format of the responses to "X" items.

Select Items and Dimensions to Retain

As stated in the summary of the first year's work, 23 items were lost in factor analysis in the sense that they did not load higher than .30 on any factor. Furthermore, the structure of the analysis was not as "clean" (in the sense of attaining the criterion of simple structure) as was desired. Also, the confounding of Academic and Health items seemed unreasonable. Finally, some dimensions seemed to have greater potential relevance to the needs of teachers and school administrators than others.

As a first step in determining dimensions to retain, teachers were asked to rank-order all dimensions with respect to their importance in understanding a child. Those teachers ($N=28$) who taught retest children did so on a form attached to their rating scale (Appendix A); those who taught non-retest children (fourth and fifth grades) in the Spring testing, ($N=16$) were given separate forms on which to record their rankings. (Appendix B). Table 14 shows the composite rank values attached to each dimension by the sample of 40 teachers who returned forms.¹

Table 14. Rank-order of Dimensions of Values Summarized from Ranks Assigned by 40 Teachers of Children in Grades 1 through 5.

<u>Dimension</u>	<u>Composite Rank Value</u>
I. Sociability	2.1
II. Health Habits	5.0
III. Academic Motivation	1.7
IV. Closeness to Adults	5.6
V. Asocial Behavior	4.1
VI. Aesthetic	5.5
VII. Social Conformity	4.0
VIII. Masculinity-Femininity	6.8
IX. Me First	5.7

¹ Two fourth grade and two fifth grade teachers did not return their forms.

From Table 14 it can be seen that the most important dimensions so far as these teachers were concerned were Academic Motivation, Sociability, Social Conformity, and Asocial Behavior. The least important were Masculinity-Femininity, Me First, Closeness to Adults, Health Habits, and Aesthetic.

Teacher rankings were not, however, to be the ultimate determiners of dimensions to be retained and/or expanded. For example, while Masculinity did not matter to teachers--and, indeed, is easy to infer from the sex of the child--the factor has been one of the most clearcut. Further, as will be seen in subsequent sections, it is highly related to a number of criteria of adjustment even when sexes are analyzed separately. The same is true of the Me First dimension which also did not seem important to teachers. On the other hand, Aesthetics and Health Habits were not only not important to teachers, but health items confounded the Academic factor in every analysis. Adult Closeness was of little interest to teachers but could prove useful in clinical diagnosis. Since it contained only two items, it seemed worthwhile to retain it but not to expand it. Sociability contained only two items but because of its importance to teachers, it seemed to qualify for expansion. The same could be said of Academic which, if health items were eliminated, would consist of only four items. These, then, were some of the considerations in making decisions with respect to the revised instrument.

Another way in which to identify items belonging to a dimension is to correlate every item with that dimension. Instead of correlating items with factor scores for a dimension, a contrived "score" was developed for each of the dimensions to avoid having the presumably extraneous items included in the score. This score consisted of the weighted composite of responses to all items the investigators had found to load greater than .30 on the dimension, with one exception. That exception consisted of the Academic/Health dimension from which it was desired to eliminate health items (taking a bath, brushing teeth, being examined by a doctor, talking to a nurse).

The results of correlations (all 60 items) using the 1970 sample minus Indians ($N=1141$) appear in Table 15. Those items followed by an asterisk (*) are the ones that made up the contrived scores. The general practice is to retain those items correlating .30 or better with the dimension and less than .30 with any other dimension.

From the results of this analysis it can be seen that the health items correlating greater than .30 with any score were related to Academic but the doctor and nurse items disappeared (i.e., correlated less than .30) and the correlations for bath and brush teeth were relatively small. This finding provided further justification for the elimination of health items.

The only item not included in the Masculinity score was the "snake" since this item had tended to disappear and reappear in various factor analysis and in the 60-item analysis based on the 1970 sample ($N=1141$) it did not load sufficiently high to warrant its inclusion. However, when correlated with the other masculinity items, its relationship was substantial ($r=.45$).

Table 15. Correlations of 60 Items with "Scores" Derived from the 1970 Eight-Factor Solution (N=1141)

<u>Dimension</u>	<u>Item</u>	<u>r</u>
Academic	Studying*	.72
	Classroom*	.68
	Reading*	.62
	Teacher*	.31
	Bath	.37
	Brush teeth	.32
Masculinity	Soldier*	.57
	Boxing*	.57
	Cave*	.53
	Knife*	.50
	Ghosts*	.47
	Snake	.45
	Tug-of-war*	.42
Aesthetic	Smelling*	.65
	Nature*	.65
	Music*	.59
Asocial Behavior	Littering*	.70
	Fence*	.66
	Water man*	.64
	Stealing*	.68
	Listen/talk	.32
Sociaillity	Play 1/many*	.81
	Talk 1/many*	.80
Adult Closeness	Mother hug/pat*	-.84
	Father pat/hug*	.83
Me First	Push/swing*	.63
	Student/teacher*	.63
	Watch/play*	.60
	1st/3rd*	-.60
	Eat/share*	-.59
Social Conformity	Listen/talk*	-.65
	Duty/play*	-.61
	Bed/up*	-.60
	Sleep/talk*	-.60
	Fight/separate	.51
	Smoke/not*	.48
	Eat/leave	-.48
	Littering	-.32

*Item is part of "score".

The Aesthetic factor was quite homogeneous and none of the other 60 items correlated with its composite score.

Asocial Behavior became contaminated with "Listen/talk," an item generally identified with Social Conformity and in this analysis correlating highest with the composite of which it was a member. Otherwise, Asocial Behavior remained pure.

Sociability and Adult Closeness retained only their respective two items and no other items among the 60 correlated with them as high as .30. Me First also remained homogeneous.

Social Conformity added three items, one of which ("Littering") belonged in Asocial Behavior. "Fight/separate" and "Eat/leave" had proven problematical in a number of factor analyses, tending to drift back and forth from one factor to another. Here, however, they did not correlate above .30 with any other dimension.

This analysis was by no means the last to be made in determining items to retain. The next step was to perform a series of factor analyses using the 1141 children in the 1970 sample and selecting the most promising items for each (i. e., items were added and subtracted until the solution seemed most satisfactory). It is impossible to report all of these analyses but it is important to mention that factor structure became increasingly clearcut when health and aesthetic items were eliminated. Furthermore, the Aesthetic factor disappeared in the eight-factor solution of pretest responses of retest children ($N=611$). Table 16 shows the last analysis of the 1141 children that was made using 30 items. No items were lost (i. e., had factor loadings less than .30) and all loaded where they were expected to. Furthermore, none split between factors. This solution seemed as close to "perfect" as any that could be attained and the decision was made to retain these items.

Intercorrelations of pre- and posttest responses to the retained items were computed and appear in Table 17. In view of the facts that (a) children are expected to change in values over eight months between testing and (b) items are not very reliable, these retest reliabilities can be expected to be small. They are, however, all significant beyond the .01 level of confidence.

As a last test of the utility of the items retained, contrived dimension scores were correlated with teacher ratings. Table 18 provides the significant ($p < .05$) correlations between each rating and "scores" derived from the summing of responses to items appropriate to the dimension rated. For the seven dimensions retained, the items used in scoring are those listed in Table 15 next to their factor names plus a health "score" derived by summing responses to the four health items.

The five cases in which a dimension score demonstrated a significant relationship to its appropriate rating were: (1) Academic Motivation rating and Academic score; (2) Closeness to Adults rating and Adult Closeness score; (3) Social Conformity rating and Social Conformity Score; (4) Masculinity rating and Masculinity score; (5) Me First rating and Me

Table 16. Seven-Factor Solution; 30 Items with
Factor Loadings above .30. (N= 1141)

I. Asocial Behavior		II. Me First	
Littering	.57	Push/swing	.55
Stealing	.46	Eat/share	-.51
Water man	.46	Watch/play	.50
Throw vegetables	.45	Student/teacher	.50
		1st/3rd	-.47
		Small/large	.35
III. Masculinity		IV. Academic	
Soldier	.45	Studying	.50
Boxing	.44	Classroom	.49
Cave	.42	Teacher	.43
Snake	.37	Reading	.37
Knife	.36		
Tug-of-war	.30		
Ghosts	.30		
V. Social Conformity		VI. Sociability	
Listen/talk	-.57	Talk 1/many	.46
Duty/play	-.47	Play/1/many	.45
Bed/up	-.46		
Sleep/talk	-.44		
Smoke/not	.39		
VII. Adult Closeness			
Hug/pat Mother	-.56		
Pat/hug Father	.54		

Table 17. Retest Reliabilities of Retained Items (N=611)

<u>Item</u>	<u>r*</u>	<u>Item</u>	<u>r*</u>
Ghosts	.32	Sleep/talk	.27
Soldier	.38	Reading	.19
Throw vegetables	.25	Boxing	.34
Studying	.26	Tug-of-war	.25
Snake	.35	Stealing	.27
Water man	.27	Littering	.44
Classroom	.29	Cave	.30
Knife	.21	Teacher	.14
Pat/hug-Father	.35	Play 1/many	.14
Smoke/not	.20	Duty/play	.21
Listen/talk	.34	Small/large	.22
Bed/up	.19	Talk 1/many	.27
Push/swing	.32	Watch/play	.25
1st/3rd	.28	Student/teacher	.29
Eat/share	.37	Hug/pat-Mother	.34

*r = .11, p < .01Table 18. Relationships between Dimension Scores
from Pretest and Teacher Ratings (N=611)

Teacher Rating Scale (criterion)	Dimension Score (predictor)	r	p
I. Sociability	Me First	.089	<.05
II. Health	(no $r > .083$)		
III. Academic Motivation	Masculinity	-.113	<.01
	Academic*	.097	<.05
	Me First	.089	<.05
IV. Closeness to Adults	Masculinity	-.127	<.01
	Adult Closeness*	.126	<.01
	Aesthetic	.111	<.01
	Sociability	.095	<.05
V. Asocial Behavior	Social Conformity	-.165	<.01
	Masculinity	.150	
VI. Aesthetic	Adult Closeness	.093	<.05
VII. Social Conformity	Social Conformity*	.157	<.01
	Masculinity	-.144	<.01
	Academic	.088	<.05

Table 18. Relationships between Dimension Scores
from Pretest and Teacher Ratings (N=611) Cont.

Teacher Rating Scale (criterion)	Dimension Score (predictor)	r	p
VIII. Masculinity	Masculinity*	.447	.01
	Social Conformity	-.251	< .01
	Adult Closeness	-.234	< .01
	Aesthetic	-.167	< .01
	Sociability	-.119	< .01
	Academic	-.106	< .05
	Asocial Behavior	.103	< .05
	Health	-.084	< .05
IX. Me First	Social Conformity	-.186	< .01
	Masculinity	.171	< .01
	Me First*	.112	< .01
X. Academic Ability	Masculinity	-.166	< .01
	Asocial Behavior	-.124	< .01
	Aesthetic	-.105	< .05
XI. Classroom Behavior	Masculinity	-.270	< .01
	Social Conformity	.240	< .01
	Asocial Behavior	-.156	< .01
	Academic	.104	< .05
	Me First	-.092	< .05
XII. Peer Relations	Social Conformity	.150	.01
	Masculinity	-.115	< .01
	Asocial Behavior	-.100	< .05
XIII. Satisfactoriness	Masculinity	-.202	< .01
	Social Conformity	.128	< .01
	Asocial	-.099	< .05

$\bar{r} = .083$; $\bar{p} < .05$

$\bar{r} = .108$; $\bar{p} < .01$

*Score predicts related criterion

First score. Most of the relationships were quite low as might be expected in view of the questionable reliability of both scores (particularly when only two items are used) and of ratings. Nevertheless, the pattern was consistent. The relationships provided here were those used in decision-making with respect to item retention. Relationships between factor scores based on the final factor structures and criteria appear in subsequent sections.

These dimension score validities affirm the relative uselessness of Health Habits and Aesthetics as dimensions for the final instrument. They also support the decision to retain Adult Closeness for diagnostic purposes but not to expand it for predictive purposes. With respect to Sociability, because of its importance to teachers it was believed that the best decision would be to expand it beyond the two items which currently comprised it in the hope that it might ultimately prove useful.

Prepare New Items

Having made the decision with respect to items to retain and eliminate, and dimensions to expand, the next step was to devise new items to measure the latter. The Masculinity factor already consisted of seven items and no more were required. With the revision of the dimensions, Academic/Health was now relabeled Academic and Asocial Behavior was shortened to Asocial. Consequently, since Academic, Asocial, Me First, Sociability, and Social Conformity needed expanding, new items designed for these dimensions were created. In each case, items were devised to be like those items already loading on the factor, particularly those loading highest. If the items already defining the factor were X items, new X items were prepared; if they were Y, new Y's were created.¹ The number prepared for any given factor depended upon the number remaining on that dimension. It was hoped that a relatively equal number of items would be included in all scales. Quite naturally, more items were prepared than were needed since it was inevitable that in pretest some would prove unsatisfactory.

Pretest New Items

The next step in revision was that of Pretest. As was the case in the original development of the VIC, pretesting was done for the purposes of determining: (1) whether or not children are able to interpret the meaning of the pictures; (2) whether or not their responses to the pictures are consistent with their feeling about the concepts expressed; and (3) whether or not there is sufficient variability of response to warrant retaining each item.

Pretest consisted, as it has in the past, of individual administration

¹ It was somewhat humorously suggested by the data analyst that perhaps the VIC consisted of an "X" factor and a "Y" factor. To permit her to indulge this fantasy, she was authorized to run a two-factor solution. She was wrong.

of items to children in an interview-like situation. The sample of children undergoing pretest in this year of work was obtained from six Children's Centers (day care facilities) in the Los Angeles City Unified School District. The complete sample consisted of 70 boys and 50 girls, an N of 120. Children tested were primarily from grades 1, 2, and 3 with a very few from grade 4. They were ethnically mixed, with all groups represented. A total of 100 children were administered X items; 61 were administered Y items. It should be noted that not all children were exposed to all items nor did all the items remain constant throughout testing. As feedback from project staff examiners was provided, some of the items were revised, often drastically, and data reported here are based only on the final forms of the items.

The process of pretest is one of continuous decision-making based on successive administrations of items. First, items are prepared. Sometimes it is impossible for the artist to do both Boy and Girl forms as quickly as they are needed. An examiner may give Boy forms only to boys and Girl forms only to girls or may give either to either sex, asking children to "pretend" that the picture-subject is appropriate.

After each set of administrations (generally a day or two testing about 15 children each day) the examiners consult with project staff, reporting on problems with each item. At this time, new items may be ready while others must be removed from the pool for redrawing. Thus, the second administration contains a somewhat different assortment of items. This iterative process continues and tallies are made at each conference to see how each item is working. Since old items were included along with new ones, results were checked to see if the child who seemed to score high on a dimension was also answering the items newly prepared to measure that dimension consistently. Also, variability of response was examined for each item to see that none was receiving a disproportionate number of either positive or negative responses.

At differing points in pretest items are removed, replaced, or discarded entirely. When an item undergoes a drastic change, data previous to the change are meaningless with respect to data acquired from administration of the final acceptable item. For this reason, N 's per item in Table 19 vary. If an X item did not require any revision, the N for this pretest is 100. For an unrevised Y item, the N is 61. Smaller N 's indicate either that the acceptable version was not achieved until a later point in pretest or that the item was not drawn until later in pretest but was considered acceptable on the basis of children's responses. This is the only efficient manner in which pretest can be properly conducted.

It has recently come to the attention of project staff that there is some question with respect to the racial identity of the picture-subjects (boy and girl) and authorities have questioned whether or not children of all races will identify with these picture-subjects. The VIC picture-subjects have been described as "obviously Anglo," and the authors of the instrument have been requested to provide data to demonstrate that they are not so perceived.

The question of non-identification has not been answered in previous reports for the simple reason that it has been so obvious to all administrators of the instrument that children of all races and subcultures automatically assume that not only are the picture-subjects "themselves" but that all other persons depicted bear natural relationships to themselves. In pretest experience Negroes, Mexican-Americans, and Orientals (as well as Anglos) have asked, for example, "Is that man smoking my Dad or my brother?" when the smoking man is the most Anglo-appearing individual depicted. They assume the "lady" and "man" they are shown talking to, or being hugged or patted by, are their "mother" and "father." These natural verbalizations of children of all subcultures led the project staff to assume that the lack of bias in identification is so obvious that it deserved no comment. Evidently, comment is necessary and the preceding statements have been made to assure those who doubt the culture-fairness of the instrument that their doubts are unrealistic.

Items pretested in 1970 in the development of the original form of the VIC and retained for the final form are included in Table 19. There, too, N's vary because the pretest process was the same. Thus, in Table 19 N's and Percent Comprehension for original (old) retained items were derived from the 1970 pretest while N's and Percent Comprehension for new items were derived from this 1971 pretest. The items themselves appear in Appendix C in the same order as they appear in the table.

Table 20 represents items retained for the final revised form which was then administered to the Fall 1971 sample. Each item is categorized as New or Old and by Factor dimension so that the reader can see the allocation of items to dimensions. The revised form consisted of 24 X items and 26 Y items, a total of 50.

Determine Response Format

In the course of pretest a question arose as to whether or not it might be simpler to provide only two responses to X items. The genesis of this idea was that examiners found that with small children there was a tendency to choose the extreme responses (i. e., "Don't like" and "Like a lot") and to ignore, or to be confused by, the middle choices (i. e., "Don't care" and "Like a little"). Because of this finding it was decided to test the effect of using four as opposed to two faces to express degree of liking. Items were, accordingly, individually administered to 44 children using the four face response format and to 29 children using only the two extreme faces as the response format. Instructions were also revised to accommodate the change in format. Table 21 presents the results of the comparison between distributions for these two response modes.

In Table 21 responses are combined for categories 1 and 2 and for categories 4 and 5 where four choices of response are given. (The reader should note that negative and indifferent faces were coded 1 and 2, respectively, and the slightly smiling and very broadly smiling faces were coded 4 and 5, respectively so that code 3 represented "no response" in analyses.) Data in this table are presented in frequencies with

Table 19. Item Numbers, Descriptors, Code Names, Dimensions, and Percent Comprehending

Item No.	Description	Code Name	Dimension	Percent Comprehending	N
1 X	S and friend in tug of war	Tug of war	Masculinity	98*	157
2 X	S writing at desk at home	Studying	Academic	100*	151
3 X	S with hose, accidentally waters man behind fence	Water man	Asocial	100*	145
4 X	Teacher points to globe;	Globe	Academic	99	100
5 X	S and three others watch	Jumping	Asocial	95	100
6 X	S jumping on couch	Cave	Masculinity	98*	154
7 X	S walking into dark cave				
7 X	S dumps bowl of food on head of other child	Dump	Asocial	91	100
8 X	S in reading circle with teacher	Class read	Academic	99	100
9 X	Ghosts coming out of haunted house	Ghosts	Masculinity	98*	259
10 X	S and friend in Halloween costume; S "soaping" car	Halloween	Asocial	90	100
11 X	S in class; teacher in front	Classroom	Academic	97*	166
12 X	Boxing match	Boxing	Masculinity	100*	129
13 X	S wipes frosting off cake with finger	Cake	Asocial	92	73
14 X	Boy stealing football from store	Stealing	Asocial	89*	100
15 X	Teacher talking to S in class	Teacher	Academic	100*	159
16 X	S throwing apple core onto litter in park	Littering	Asocial	93*	157
17 X	Soldier with gun	Soldier	Masculinity	100*	150
18 X	S and two others writing on blackboard; teacher watching	Writing	Academic	99	100
19 X	S pushing friend into pool	Pool	Asocial	89	73
20 X	S walking to school	School	Academic	96	73
21 X	S carving with knife	Knife	Masculinity	100*	41
22 X	S watching friend throw vegetables at fence	Fence	Asocial	99*	106

Table 19. (continued)

Item No.	Description	Code Name	Dimension	Percent Comprehending	N
23 X	S looking at snake	Snake	Masculinity	98*	153
24 X	S reading in chair	Reading	Academic	99*	144
25 Y	(a) S and one friend; picnic	Picnic 1/+	Sociability	93	61
	(b) S and 3 friends; picnic				
26 Y	(a) S and friends watch movie	Movie/hand	Social Conformity	98	61
	(b) S sticks hand in front of projector				
27 Y	(a) S eats cookie; friend, none	Eat/share	Me First	98*	66
	(b) S gives cookie to friend				
28 Y	(a) Man smoking	Smoke/not	Social Conformity	100*	161
	(b) Man not smoking				
29 Y	(a) S talks to one friend	Talk 1/+	Sociability	95*	251
	(b) S talks to several friends				
30 Y	(a) S gives single cone; keeps double	Cone 2/1	Me First	91	52
	(b) S gives double cone; keeps single				
31 Y	(a) S keeps small cake; gives large to friend	Small/large	Me First	90*	61
	(b) S keeps large cake; gives small to friend				
32 Y	(a) S and 3 friends build sand castle	Castle +/-	Sociability	92	36
	(b) S and one friend build sand castle				
33 Y	(a) Father pats S on head	Pat/hug-F	Adult Closeness	100*	150
	(b) Father picks S up and hugs				
34 Y	(a) S pushes friend in wagon	Push/ride	Me First	96	61
	(b) Friend pushes S in wagon				
35 Y	(a) S listens to teacher	Listen/talk	Social Conformity	96*	146
	(b) S talks to friend in class				
36 Y	(a) S and friend clean dirty classroom	Duty/play	Social Conformity	97*	147
	(b) S and friend play in dirty classroom				

Table 19. (continued)

Item No.	Description	Code Name	Dimension	Percent Comprehending	N
37 Y	(a) S dances with 3 friends	Dance +/1	Sociability	100*	16
38 Y	(b) S dances with 1 friend				
39 Y	(a) S pushes friend in swing	Push/swing	Me First	98*	117
40 Y	(b) Friend pushes S in swing				
41 Y	(a) S watches: friend plays	Watch/play	Me First	96*	93
42 Y	(b) S plays; friends watch				
43 Y	(a) S is first in line	1st/3rd	Me First	93*	168
44 Y	(b) S is first in line				
45 Y	(a) S listens; other plays teacher				
46 Y	(b) S plays teacher; others listen	Student/teacher	Me First	97*	100
47 Y	(a) S walks with two friends				
48 Y	(b) S walks with one friend	Walk 2/1	Sociability	98	16
49 Y	(a) S sick; stays in bed				
50 Y	(b) S sick; gets up	Bed/up	Social Conformity	90*	156
51 Y	(a) S takes last cookie				
52 Y	(b) S lets other take last cookie	Take/no	Me First	96	30
53 Y	(a) S tosses ball to friend in living room				
54 Y	(b) S rolls ball to friend in living room	Toss/roll	Social Conformity	96	52
55 Y	(a) S plays with one friend				
56 Y	(b) S plays with several friends	Play 1/+	Sociability	98*	174
57 Y	(a) S and friend hang up wash				
58 Y	(b) S and friend play tug-of-war with wash	Wash/play	Social Conformity	98	52
59 Y	(a) Mother hugs S				
60 Y	(b) Mother pats S on head	Hug/pat-M	Adult Closeness	97*	138
61 Y	(a) S goes to bed leaving toys on floor				
62 Y	(b) S picks up toys	Leave/pickup	Social Conformity	90	52
63 Y	(a) S and friend sleep in beds				
64 Y	(b) S and friend talk in bed	Sleep/talk	Social Conformity	99*	146

*1970 Pretest

Table 20. Items Contained in Final Revised Instrument

Factor & Type	Old Item	N	New Item	N	Total
Masculinity (X)	Soldier Boxing Cave Knife Ghosts Snake Tug-of-war	7		0	7
Academic (X)	Studying Classroom Reading Teacher	4	Class read Writing Globe School	4	8
Asocial (X)	Littering Stealing Water man Fence	4	Jumping Dump Halloween Cake Pool	5	9
Adult Closeness (Y)	Hug/pat-M Pat/hug-F	2		0	2
Me First (Y)	Push/swing Student/tchr. Watch/play 1st/3rd Eat/share Small/large	6	Push ride Cone 2/1 Take/no	3	9
Sociability (Y)	Talk 1/+ Play 1/+	2	Picnic 1/+ Walk 2/1 Castle +/1 Dance +/1	4	6
Social Conformity (Y)	Listen/talk Duty/play Bed/up Sleep/talk Smoke/not	<u>5</u>	Movie/hand Wash/play Leave/pickup Toss/roll	<u>4</u>	<u>9</u>
	Totals	30		20	50

Table 21. X Item Distributions and Percent Differences in Deviant Responses Using Four, (N=44) and Two (N=29) Face Responses

Item	No. Faces	Dislike		Like		Percent Difference
		N	%	N	%	
Reading	4	6	14	38		
	2	<u>3</u>	10	26		+4%
Water man	4	39		5	11	
	2	28		<u>1</u>	3	+8%
Studying	4	5	11	39		
	2	<u>3</u>	10	26		+1%
Jumping	4	36		8	18	
	2	25		<u>4</u>	14	+4%
Littering	4	36		8	18	
	2	28		<u>1</u>	3	+15%
Dump	4	37		7	16	
	2	29		<u>0</u>	0	+16%
Classroom	4	8	18	36		
	2	<u>2</u>	7	27		+11%
Stealing	4	40		4	9	
	2	29		<u>0</u>	0	+9%
Cake	4	32		12	27	
	2	23		<u>6</u>	21	+6%
Teacher	4	11	25	33		
	2	<u>8</u>	28	21		-3%
Class read	4	6	14	38		
	2	<u>4</u>	14	25		0
Halloween	4	37		7	16	
	2	28		<u>1</u>	3	+13%
Writing	4	5	11	39		
	2	<u>3</u>	10	26		+1%
Pool	4	36		8	18	
	2	27		<u>2</u>	7	+11%
Globe	4	11	25	33		
	2	<u>3</u>	10	26		+15%
Fence	4	32		12	28	
	2	27		<u>2</u>	7	+21%
School	4	6	14	38		
	2	<u>3</u>	10	26		+4%

percentages calculated for deviant responses only.

By inspection of the data it was evident that the effect of using two faces was to increase disapproval of Asocial items and approval of Academic items. For example, children given the two-face format did not have the opportunity to slightly approve of or be indifferent to Asocial items, so they selected the only negative response face. The last column of Table 22 gives the difference between the percentage of deviant responses (dislike Academic activities or situations; like Asocial activities or situations) using four faces and that using two faces. Where the difference is positive, the deviation is "in favor of" the four faces in that this format results in more deviant responses.

In some cases the effect was dramatic; in others it was minimal. In one case ("Teacher"), it was in the opposite direction (i. e., the two-face response format elicited more disliking for the teacher). However, the net effect of using only two faces seemed to be an undesirable one with respect to "social desirability" response set and so the decision was made to retain the four-face response mode for X items. Further support for this decision was provided by the fact that the results of original 1970 testing as well as Spring 1971 retesting were based on this format and when the results of Fall 1971 testing were to be compared with previous results there would be no way to determine to what extent a change in response format might affect comparisons unless additional children were added to the sample and some given one format while others were given the other.

Revise Administration

Having made decisions with respect to what items to retain from the original pool and what items to use from the newly created items as well as whether or not to alter the response format, the next task in revision was to improve the administration of the instrument.

For some time examiners had felt that the original training format for X items contained some elements that were confusing to young children. Therefore, the following changes were made. First, the first page in the booklet contained the four faces with which children were to familiarize themselves. In previous administrations they were asked to circle both of the extreme faces. When the answer sheet was used this tended to confuse children since in responding to items in the test, they were to circle only one face. Consequently, the item with four faces alone was removed from the answer sheet.

Second, the training picture designed to correspond to the "don't care" face was one of the picture-subject sitting in a chair. It was changed to one in which the picture-subject is sitting on the ground since this picture seemed to better represent "doing nothing" and did not have the connotation of punishment often associated with being relegated to a chair.

Third, instead of repeating the four training items, it was felt that it would be helpful to children to give them (1) a very "bad" picture to

which they might be expected to universally respond with the "Don't like" face; (2) a very "good" picture to which they might be expected to respond with the "Like it a lot" face; and (3) a picture to which they might respond with any of the four choices. The first of these pictures was one which was eliminated during pretest because no child liked it. It represents the picture-subject throwing rocks onto a freeway from an overcrossing. This is the first picture containing an additional person. Children are asked to "find themselves in their striped clothes." This practice is important since it is essential that each child develop the habit of identifying "himself" in each picture. The second is an item liked by all children. It shows the picture-subject receiving a present. The third is "Tug-of-war," technically the first test item, on which opinion has generally been divided. The administrator uses this picture to introduce the concept that differences of opinion are acceptable, and states "The face that tells how you feel is the right face to circle."

Fourth, the use of verbal feedback from the class has been re-sequenced so that children learn two response faces at a time, rather than all four at once. The use of feedback has been extremely effective, especially with first grade children. They no longer need individual prompting concerning the meaning of each face. The procedure involves asking the class to repeat after the administrator (who is pointing to the appropriate face drawn on the board): "This face says 'I like what I am doing very much'," and "This face says 'I don't like what I am doing'." The class then looks at the booklet and responds to "eating ice cream" and "falling down." The next picture contains the "I don't know how I feel" response. This face response is explained to the children, and echoed by them at that time. They then mark in their booklets. Finally, the last face, "I like what I am doing a little bit," is explained, echoed, and circled in the booklet. Following this initial training, responses to all faces are repeated while the children are looking at the board. Instructions for training appear in Appendix D. The training items are numbered with Roman numerals and precede test items in Appendix C.

Test Effects of Answer Sheet

The final decision to be made with respect to administration had to do with the applicability of an answer sheet to accompany the test booklet.

As a practical matter, it is far less expensive to employ reusable test booklets with answer sheets than to have children respond by marking on the booklet which then must be thrown away. However, small children have difficulties in matching booklet items with answer sheet items. At what age level a child can handle an answer sheet, if properly instructed in its use, is probably a function not only of maturation but of the style of the answer sheet. Standard IBM answer sheets can be difficult, even for adults.

An answer sheet was devised in such a manner that each item in the test booklet was replicated in a line drawing next to the item number. The answer sheet and its accompanying instructions for use appear in Appendix E. This answer sheet was developed for use with the original

VIC. Since the revised VIC contained different items, a new form of the answer sheet was necessary for its administration. That answer sheet and the revised instructions also appear in Appendix E.

Experience in preliminary tryouts with children indicated that the lowest level at which the answer sheet could be expected to be uniformly satisfactory was third grade. Therefore, in the 1971 Spring testing, an extra sample of third-graders were tested, some with booklets and others with answer sheets, to compensate for the possibility that should the answer sheet fail with these children, a sufficient number of retest Ss would be obtained for analyses.

To test the effect of the answer sheet it was necessary to determine whether Answer Sheet third-graders (N=91) were originally different from Booklet third-graders (N=176) on the basis of their pretest responses to items using the booklet. Therefore, t tests between item responses were performed not only for posttest but also for pretest. Only those items to be retained (N=30) were examined for significant differences. On pretest there were no significant differences between Answer Sheet (A) and Booklet (B) users. On posttest there were four. Table 22 below shows these differences.

Table 22. Significant t ratios for Third Grade Answer Sheet (N=91) vs Booklet (N=176) Users on 30 Retained Items

<u>Item</u>	<u>MA</u>	<u>MB</u>	<u>t</u>	<u>p</u>	<u>Direction</u>
Ghosts	2.32	1.92	2.02	.05	A>B
Soldier	2.69	2.20	2.40	.02	A>B
Push/ <u>swing</u>	2.80	3.07	-2.11	.04	B>A
Eat/ <u>share</u>	3.55	3.27	2.32	.02	A>B

The direction of responses indicates that the A group liked ghosts and the soldier better than did the B group. On the two choice items, the B group would rather swing than push and the A group would rather share than eat. While the number of items significant beyond the .05 level was slightly greater than chance (i.e., 1.5), the effect of the answer sheet seemed minimal. Furthermore, when the two groups were compared on the basis of teacher ratings, profound differences appeared. Table 23 gives the significant differences for those ratings that differentiated.

The directions of the differences are provided so that the reader may avoid the confusion of interpreting rating means, all of which, with the exception of Classroom Behavior, are reversed (i.e., the higher the rating, the lower the mean).

Table 23. Significant t ratios for Third Grade Answer Sheet
(N=91) vs Booklet (N=176) Users on Teacher Ratings

<u>Rating</u>	<u>M_A</u>	<u>M_B</u>	<u>t</u>	<u>p</u>	<u>Direction</u>
Sociability	1.98	2.73	-4.68	.000	A > B
Health Habits	1.68	2.34	-3.44	.001	A > B
Academic Motivation	2.00	2.89	-5.95	.000	A > B
Asocial Behavior	4.09	3.26	4.96	.000	B > A
Aesthetics	2.43	2.84	-2.61	.009	A > B
Social Conformity	1.91	2.44	-3.35	.001	A > B
Classroom Behavior	3.78	3.36	2.51	.013	A > B
Peer Relations	1.91	2.44	-4.52	.000	A > B

From Table 23 it can be seen that the group using the Answer Sheet was rated higher in Sociability, Health Habits, Academic Motivation, Aesthetics, Social Conformity, good Classroom Behavior, and good Peer Relations than was the Booklet group. The Booklet group, on the other hand was rated higher in Asocial Behavior than was the Answer Sheet group. These findings suggest that either the two groups were very different or their teachers' perceptions of them were quite divergent. In view of these findings, the four items to which A's responded differently from B's seem insignificant. The results of the A group's testing were, therefore, incorporated into all further analyses and answer sheets were subsequently used with all third-graders as well as fourth- and fifth-graders.

Prepare Revised Form

Preparation of the revised instrument involved: (1) retouching all pictures according to preestablished criteria; (2) determining the order in which items were to be assembled into booklets; and (3) instructing the offset printers in the manner in which booklets were to be printed, cut, assembled, etc.

Criteria for retouching pictures include: (1) making sure that the facial expression of the picture-subject in X items does not encourage a face-response match; (2) making sure that in Y pictures the alternatives are exactly alike except with respect to the one difference the child is to notice; (3) making sure the picture-subject stands out from other aspects of each picture so that he/she can be readily identified; and (4) general aesthetic alterations.

Items were arranged in an order such that the child does not develop a response set. Socially desirable items were alternated with socially

undesirable or neutral items. In the Y booklet, items most frequently receiving a left-hand choice were alternated with those most frequently receiving a right-hand choice. Where items required the child to identify his place (location) in the scene, the easiest of those items preceded the more difficult. In general, simpler items tended to be placed before more difficult ones.

CHAPTER FIVE

RESULTS OF RETEST GROUP ANALYSES

To spare the reader from the examination of an endless number of t ratios, the general practice with respect to inter-group comparisons is to present a series of tables (subtables) in which the diagonal entries represent the means for each group. Groups are identified in the margins of the subtable. Entries above diagonals are precise (to three places) probability levels where t tests reveal significant differences. Entries below diagonals show which group is significantly higher--that is, the direction of the difference. In some cases, where there are very few significant differences, non-significant ones are not presented in tabular form but the narrative describes those few that are significant. In those cases where tables are provided and a difference is not significant, the p level entry above the diagonal or in a column reads "ns" for non-significant.

When relationships between variables (correlations) are presented, they are invariably Pearson r approximations. Only those significant at the .05 level or better are discussed. Others are termed nonsignificant (ns) if presented. In some cases, the authors have taken the liberty of reflecting the signs of factor loadings, ratings, correlations, etc. so that the true relationships are depicted. No one-tailed tests are used, despite hypotheses, because the data do not warrant their use.

Sex Differences

Ratings

In order to determine the differences in the manner in which teachers rated girls as opposed to boys, t tests were computed for the significance of the difference on each scale. The results are shown in Table 24.

Comparisons provided little in the way of surprises. Girls were rated higher in health habits, academic motivation, closeness to adults, social conformity, academic ability, good classroom behavior, good peer relations, and "satisfactoriness" or likeableness. Boys, on the other hand, were rated as more asocial and selfishly dominant (Me First). The masculinity rating was so sex-linked as to be almost irrelevant. Ratings of sociability and aesthetics did not differentiate between the sexes. Obviously, so far as teachers are concerned, girls have all the virtues and boys all the vices.

Reading Scores

When unadjusted reading scores (i. e., grade levels) for the subsamples of 218 boys and 247 girls were compared, the difference between the sexes was nonsignificant. When reading scores were adjusted for grade level and the sexes were compared, the same result was found. The mean adjusted reading score for girls was .100. For boys it was -.066. Thus, although boys are slightly below grade level and girls slightly above, the difference is non-significant.

Table 24. Significant Differences between Sexes with Respect to Ratings (Boys: $N=287$; Girls: $N=324$)

Rating	M_B	M_G	t	p	Direction
Health Habits	1.86	1.67	-2.03	.043	G>B
Academic Motivation	2.37	2.12	-2.59	.010	G>B
Adult Closeness	3.42	2.70	-6.79	.000	G>B
Asocial Behavior	3.66	4.07	4.20	.000	B>G
Social Conformity	2.20	1.81	-4.29	.000	G>B
Masculinity	1.78	4.17	32.52	.000	B>G
Me First	3.17	3.54	3.22	.001	B>G
Academic Ability	2.82	2.55	-2.98	.003	G>B
Classroom Behavior	3.29	4.06	7.70	.000	G>B
Peer Relations	2.17	1.97	-2.20	.028	G>B
Satisfactoriness	1.95	1.60	-4.41	.000	G>B

Factor Scores

In making comparisons between boys and girls (as well as between grade levels and ethnic groups), comparisons between pre- and posttest are described on the basis of apparent differences between means rather than statistical tests. The reason for this is that the factor scores for pretest are derived from the analysis of pretest item responses while those for posttest are derived from posttest responses. Thus, although the factor structures are much the same and the same factors are identifiable, the factor scores do not have one-to-one correspondence. Table 25 presents comparisons between boys and girls for all factors both pre- and posttest. The p levels of the t ratios are given above the diagonals. The diagonal entries represent the mean factor scores for the groups identified in the margins of the subtables.

In the Boy (B)-Girl (G) comparisons in Table 25 it can be seen that:

1. Boys scored significantly higher in Me First in pretest than did girls but in posttest the difference was no longer significant.
2. Boys, quite naturally, scored significantly higher than did girls in Masculinity in both pre- and posttest. Boys appear to have become more Masculine while girls became less so.

Table 25. Significant Differences between Sexes with Respect to Factor Scores on Pre- and Posttest (Boys: $N=287$; Girls: $N=324$)

Factor	Pretest		Posttest	
Me First	B	G	B	G
B	.091	.010	.064	ns
G	B > G	-.081		-.057
Masculinity	B	G	B	G
B	.311	.000	.408	.000
G	B > G	-.275	B > G	-.362
Asocial	B	G	B	G
B	.037	ns	.026	ns
G		-.033		-.023
Academic	B	G	B	G
B	-.034	ns	-.029	ns
G		.030		-.023
Adult Closeness	B	G	B	G
B	-.216	.000	-.281	.000
G	G > B	.192	G > B	.249
Sociability	B	G	B	G
B	-.055	ns	-.193	.000
G		.049	G > B	.171
Social Conformity	B	G	B	G
B	-.013	ns	-.097	.002
G		.011	G > B	.171

3. In neither pre- nor posttest was there a significant difference between the sexes with respect to Asocial. Both sexes were about "average" (i. e., means are close to zero).
4. Academic factor scores did not differentiate between boys and girls. Means for this factor were also close to zero.
5. Girls liked physical closeness with parents better than did boys in both pre- and posttest. The sexes became increasingly divergent in this factor with boys liking it less and girls liking it more.
6. There was no difference between the sexes in Sociability in pretest but in posttest girls scored higher than boys and while the mean for the girls became higher, that for the boys decreased in size.
7. On pretest the difference between the sexes with respect to Social Conformity was nonsignificant; on posttest girls became significantly more conforming than boys. Boys decreased (became more negative) in Social Conformity scores while girls were increasing.

Factor Score Changes

When t tests were computed for the significance of differences between factor score changes for sexes, the results were significant for only four dimensions. Table 26 reflects these changes. It must be remembered that the change score is based not on the difference between pre- and posttest, but on the difference between the predicted posttest and the actual posttest with the predicted posttest dependent upon pretest results. Therefore, when one group changes more than another the change is more in excess of the predicted change for that group than it is for the other. In the case of factor scores, the sign of the change indicates the direction of that change.

Table 26. Significant Differences between Sexes with Respect to Factor Score Changes between Pre- and Posttest (Boys $N=287$; Girls: $N=324$)

<u>Factor</u>	Pretest M_B	Posttest M_B	Pretest M_G	Posttest M_G	Chg. B	Chg. G
Masculinity	.311	.408	-.275	-.362	.258*	-.228
Adult Closeness	-.216	-.281	.192	.249	-.179*	.158
Sociability	-.055	-.193	.049	.171	-.180*	.160
Social Conformity	-.013	-.097	.011	.171	-.094*	.083

* $p < .01$; $B > G$

The results can be summarized as follows:

1. Boys changed more than did girls in Masculinity scores. Technically, this statement should read: "Boys changed more relative to their predicted change than girls changed relative to their predicted change on the factor of Masculinity" but such a statement is unwieldy. It will be noted from the means that boys scored higher in posttest than in pretest while girls scored lower on this factor.
2. Boys changed more in Adult Closeness than did girls. Their change was in the direction of a decrease in this value. Girls increased in it.
3. Boys changed more in Sociability than did girls. Their change was toward decreasing interest in this value while the girls changed in the opposite direction.
4. Boys changed more than did girls in Social Conformity. Their change indicated a decrease in this value while that for girls was an increase.

Evaluation of change scores serves to support conclusions based on examination of pre- vs posttest means in the previous section.

Teacher-Child Congruities

Table 27 below shows that in both pre- and posttest girls were more like their teachers in values than were boys. Furthermore, boys did not appear to change in their correspondence to the teacher over the eight months but the girls became more like her. This finding is not unexpected in view of the fact that 27 of the 28 teachers were female and differences in the Masculinity factor could account for quite a bit of the difference in congruity. Part of the difference may also be attributable to increases on the part of girls in Sociability, Social Conformity, and Adult Closeness seen in the factor score comparisons.

Table 27. Significant Differences between Sexes with Respect to Teacher-Child Congruities on Pre- and Posttest (Boys: N=287; Girls: N=324)

Pretest			Posttest		
	B	G		B	G
B	.175	.000	B	.176	.000
G	G>B	.305	G	G>B	.369

Teacher-Child Congruity Changes

It is not sufficient to inspect the means from Table 27 to identify the significance of the difference in changes. When the base-free measure of change was employed, it was found that boys changed (relative to their predicted change) more than did girls. Their mean change score was $-.066$ while that for the girls was $.059$. Thus, boys became less like teachers than predicted while girls became more like them but not more so than predicted. The difference was significant at $p=.000$.

Grade Level Differences

Ratings

Table 28 provides some interesting insights into the manner in which teachers view children in different grades. The most obvious aspect of the results is the superiority of grade two in almost all respects. Second-graders were rated (1) higher than third in Sociability, (2) higher than third in Health Habits, (3) higher than third in Academic Motivation, (4) higher than either first or third in Adult Closeness, (5) lower than either first or third in Asocial Behavior, (6) higher than either first or third in Aesthetics, (7) higher than third in Social Conformity, (8) higher than third in Academic Ability, (9) higher than either first or third in good Classroom Behavior, (10) higher than third in their ability to get along with peers, and (11) better liked or more satisfactory than either first or third.

Equally notable is the relatively general negative feeling of teachers toward third graders. In addition to those aspects with respect to which third grade children were rated inferior to second, stated above, the third grade child was rated lower than the first grade child in (1) Health Habits, (2) Academic Motivation, (3) Social Conformity, (4) Academic Ability, and (5) relations with peers. Third-graders were rated higher in Asocial Behavior than were first-graders despite their greater socialization. That third-graders score lower than second, and second lower than first on Asocial was demonstrated in comparisons between these grades in the first year of research with this instrument (Guilford, Gupta, & Goldberg, 1971). As will be seen in factor score comparisons here, however, differences in Social Conformity disappear in posttest grade comparisons.

The only ratings on which no differences appeared were Masculinity (because girls and boys remain relatively evenly divided in numbers throughout the first three years of school) and Me First where, evidently, none of the three grades is perceived as being more dominantly aggressive or selfish than any other.

A possible interpretation of these findings is that second grade children have begun to adjust to the regimen of school and so are more tractable and easy to handle. First grade children can be excused for a good many things. Third grade children are expected to have reached a level of maturity appropriate to the level of instruction but are exercising

Table 28. Significant Differences between Grade Levels with Respect to Ratings (1: N=165; 2: N=179; 3: N=267)

Sociability

	1	2	3
1	2.29	ns	ns
2		2.23	.030
3		2>3	2.47

Health Habits

	1	2	3
1	1.43	ns	.000
2		1.53	.000
3	1>3	2>3	2.11

Academic Motivation

	1	2	3
1	2.06	ns	.000
2		1.89	.000
3	1>3	2>3	2.59

Adult Closeness

	1	2	3
1	3.21	.005	ns
2	2>1	2.78	.008
3		2>3	3.10

Asocial Behavior

	1	2	3
1	4.01	.039	.000
2	1>2	4.26	.000
3	3>1	3>2	3.53

Aesthetic

	1	2	3
1	2.48	.006	ns
2	2>1	2.15	.000
3		2>3	2.70

Social Conformity

	1	2	3
1	1.86	ns	.000
2		1.71	.000
3	1>3	2>3	2.26

Masculinity

	1	2	3
1	3.02	ns	ns
2		3.06	ns
3			3.05

Me First

	1	2	3
1	3.26	ns	ns
2		3.53	ns
3			3.32

Academic Ability

	1	2	3
1	2.50	ns	.037
2		1.81	.000
3	1>3	2>3	2.26

Classroom Behavior

	1	2	3
1	3.59	.000	ns
2	2>1	4.08	.000
3		2>3	3.51

Peer Relations

	1	2	3
1	2.02	ns	.037
2		1.81	.000
3	1>3	2>3	2.26

Satisfactoriness

	1	2	3
1	1.86	.006	ns
2	2>1	1.56	.002
3		2>3	1.85

their individuality and testing the limits, a process destined to meet with disapproval. It is unfortunate that within the limits of this study fourth grade children could not have been rated since it is at the fourth grade that a multitude of research results indicate a reversal of this trend to one of conformity with a concomitant slump in self-expression.

Reading Scores

It is obviously useless to compare grade levels on the basis of reading scores which are, themselves, based on grade levels. However, a comparison of scores free of grade level bias showed that grade one was significantly higher relative to grade level than were grades two or three. The results appear in Table 29.

Table 29. Differences between Adjusted Reading Scores by Grade

<u>Comparison</u>	<u>N₁</u>	<u>N₂</u>	<u>M₁</u>	<u>M₂</u>	<u>t</u>	<u>p</u>	<u>Direction</u>
1 <u>vs</u> 2	132	133	.330	.019	-2.61	.010	1>2
2 <u>vs</u> 3	133	200	.019	-.178	-1.56	ns	
1 <u>vs</u> 3	132	200	.330	-.178	-4.40	.000	1>3

From Table 29 it can be seen that first grade children were above their grade level in reading. So were second grade children, to a lesser extent. Third grade children, however, were below their grade level. It is not possible to make inferences from these data but one possible interpretation might be that there is a progressive deterioration in reading achievement with increasing exposure to school. If so, its causes need exploring.

Factor Scores

Table 30 shows the changes that occurred with maturation both from pre- to posttest and from grade one through grade three. Results to show that:

1. In pretest grade three scored lower than either grades one or two in Me First and on posttest grade one scored higher than either two or three and grade two scored higher than three. Over the eight months, first-graders increased in this value while both second- and third-graders decreased.
2. Although the means for Masculinity were lower for grade one than grade two, and lower for two than three on pretest, the differences were nonsignificant. The same progression of means existed in posttest but while grade one became lower on this dimension, grades two and three increased and the difference between one and three was significant.

Table 30. Significant Differences between Grade Levels with Respect to Factor Scores on Pre- and Posttest (1:N=165; 2:N=179; 3:N=267)

Factor	Pretest			Posttest			
Me First	1	2	3	1	2	3	
1	.106	ns	.008	1	.231	.037	.000
2		.067	.031	2	1>2	.046	.009
3	1>3	2>3	-.110	3	1>3	2>3	-.174
Masculinity	1	2	3	1	2	3	
1	-.048	ns	ns	1	-.106	ns	.035
2		-.022	ns	2		-.001	ns
3			.045	3	3>1		.067
Asocial	1	2	3	1	2	3	
1	.392	.000	.000	1	.276	.004	.000
2	1>2	-.028	.005	2	1>2	.016	.011
3	1>3	2>3	-.223	3	1>3	2>3	-.181
Academic	1	2	3	1	2	3	
1	.101	ns	ns	1	.078	ns	.024
2		-.027	ns	2		.074	.023
3			-.044	3	1>3	2>3	-.098
Adult Closeness	1	2	3	1	2	3	
1	.055	ns	ns	1	.067	ns	ns
2		.000	ns	2		-.004	ns
3			-.034	3			-.039
Sociability	1	2	3	1	2	3	
1	-.071	ns	ns	1	-.066	ns	.008
2		-.041	ns	2		-.127	.000
3			.072	3	3>1	3>2	.126
Social Conformity	1	2	3	1	2	3	
1	-.235	.010	.000	1	-.058	ns	ns
2	2>1	-.013	.018	2		.043	ns
3	3>1	3>2	.153	3			.007

3. Asocial is a factor that in previous analyses has been very subject to change with age. Here, too, the differences between grades on both pre- and posttest were all significant with grade one scoring higher than two or three and grade two scoring higher than three.
4. In pretest the means for Academic value became progressively lower with increasing schooling, but the differences between grades were nonsignificant. In posttest means for grades one and three became lower while that for grade two was higher. Both first- and second-graders scored higher in Academic values than did third-graders.
5. There were no significant differences between grade levels with respect to factor scores on Adult Closeness and the means scarcely changed at all. Perhaps the increasing scores of girls were counterbalanced by the decreasing scores of boys resulting in an obscuring of differential changes by grade.
6. In pretest no grade was significantly different from any other with respect to Sociability scores. However, in posttest grade three scored significantly higher than grades one or two.
7. In pretest there were significant differences between the three grades with respect to Social Conformity scores. Grade three was higher than two which, in turn, was higher than one. These results are consistent with those of the previous year's testing. However, all significant differences disappeared in posttest and while first and second-graders seem to have attained higher means, third-graders had a lower mean.

Factor Score Changes

In all of the grade level comparisons of factor score changes, only one significant (.001) difference appeared. That change was in Me First. Both first and second grade children scored higher on posttest than did third but the first grade children became relatively more selfish and dominant than predicted ($M=.177$) than did the second-graders ($M=.012$).

Teacher-Child Congruities

Table 31 indicates that in pretest first-grade children were less like their teachers than were either second- or third-grade children. In posttest only the differences between third and first remained significant. At all grade levels, congruity was higher on posttest than on pretest (i. e., means increased).

Table 31. Significant Differences between Grade Levels with Respect to Teacher-Child Congruities (1: $N=165$; 2: $N=179$; 3: $N=267$)

<u>Pretest</u>				<u>Posttest</u>			
	1	2	3		1	2	3
1	.177	.015	.000	1	.241	ns	.035
2	2>1	.245	ns	2		.284	ns
3	3>1		.284	3	3>1		.298

Teacher-Child Congruity Change

When changes relative to predicted changes were assessed, no significant differences appeared. Thus, despite the higher means on posttest for all grade levels, none constitutes a relatively greater change than any other.

Ethnic Group Differences

Ratings

Table 32 shows the inter-ethnic comparisons of ratings for the four ethnic groups involved: Anglo, Negro, Oriental, and Mexican-American. The conclusions to be drawn from Table 32 are as follows:

1. Negro children were rated as more Sociable than were either Anglo or Oriental children; Mexican-American children were rated as more sociable than Anglo children.
2. Mexican-Americans received lower ratings in Health Habits than did either Negroes or Orientals. It should be remembered that this Mexican-American group was composed of children living in a poverty area.
3. Anglos received lower ratings in Academic Motivation than did any other ethnic group.
4. Mexican-American children were rated higher in wanting to be physically close to adults than were either Anglo or Oriental children.
5. All groups were rated higher in Asocial Behavior than were Orientals. No group was rated as high in this characteristic as were Mexican-Americans. Anglos and Negroes did not differ.
6. There were no differences between the groups with respect to ratings of Aesthetic appreciation.

Table 32. Significant differences between Ethnic Groups with Respect to Ratings
(A: N=109; N: N=98; O: N=167; M: N=101)

<u>Sociability</u>				<u>Health Habits</u>			
A	N	O	M	A	N	O	M
2.62	.000	ns	.034	1.82	ns	ns	ns
N>A	2.00	.004	ns		1.61	ns	.002
	N>O	2.42	ns			1.63	.006
M>A			2.25		N>M	O>M	2.06

<u>Academic Motivation</u>				<u>Adult Closeness</u>			
A	N	O	M	A	N	O	M
2.50	.009	.018	.030	3.14	ns	ns	.016
N>A	2.05	ns	ns		2.92	ns	ns
O>A		2.12	ns			3.19	.004
M>A			2.14	M>A		M>O	2.70

Table 32. (cont.)

Asocial Behavior

	A	N	O	M
A	3.89	ns	.001	.001
N		3.82	.000	.002
O	A>O	N>O	4.38	.000
M	M>A	M>N	M>O	3.28

Aesthetics

	A	N	O	M
A	2.41	ns	ns	ns
N		2.73	ns	ns
O			2.45	ns
M				2.44

Social Conformity

	A	N	O	M
A	2.06	ns	.001	ns
N		1.95	.006	ns
O	O>A	O>N	1.59	.000
M			O>M	2.24

Masculinity

	A	N	O	M
A	3.01	ns	ns	ns
N		3.04	ns	ns
O			3.19	ns
M				3.00

Me First

	A	N	O	M
A	3.28	ns	.000	.047
N		3.10	.000	ns
O	A>O	N>O	3.87	.000
M	M>A		M>O	2.90

Academic Ability

	A	N	O	M
A	2.65	ns	.031	ns
N		2.81	.002	ns
O	O>A	O>N	2.35	.000
M			O>M	2.81

Table 32. (cont.)

Classroom Behavior	Peer Relations			
	A	N	O	M
A	3.66	ns	.000	ns
N		3.55	.000	ns
O	O>A	O>N	4.25	.000
M			O>M	3.36

Satisfactoriness	Peer Relations			
	A	N	O	M
A	1.70	ns	ns	ns
N		1.69	ns	ns
O			1.52	.000
M			O>M	1.93

*Means in diagonal.
 **p level of significance above diagonal.
 ***Direction of difference below diagonal.

7. Orientals were rated as more socially conforming than any other group, consistent with their lower-than-others rating in asocial behavior.
8. There were no differences between groups with respect to Masculinity ratings, probably because there were no differences between them with respect to the proportionality of boys and girls.
9. Orientals were rated least dominant and selfish, being surpassed by all other groups on Me First. Mexican-Americans were rated higher in this characteristic than were Anglos.
10. The Oriental received a higher rating in Academic Ability than did any other ethnic group member. There were no significant differences between the other three groups except that the Anglo seemed to be slightly higher-rated than the Negro or Mexican-American. The latter two had identical means.
11. The Oriental child was superior to all children in rating of classroom decorum. Differences between other ethnic groups were nonsignificant.
12. All three other ethnic group members were rated as getting along better with their classmates than were Mexican-American children.
13. The only instance in which there was a significant difference in the "satisfactoriness" rating of children was in the superiority of the Oriental over the Mexican-American. Teachers generally tended to rate children as likable even when they presented problems.

It would seem from these findings that the Oriental child makes the "ideal" student (or at least is so perceived by the teacher). The major surprise relates to Anglos who, it must be remembered, were tested in the same schools as Orientals. Teachers' perceptions of them as less academically motivated are consistent with their measured values. That they are seen as more asocial, less conforming, more selfish and dominant, less capable academically and less well-behaved than their Oriental classmates is interesting.

Reading Scores

Table 33 presents the differences between those ethnic groups for whom reading scores were available (Anglos, Orientals, and Mexican-Americans). It should be recalled that Anglos and Orientals attended innovative schools in a middle- to upper-middle-class area while Mexican-Americans lived in a relatively isolated community of predominantly Spanish-speaking families who were also, in many cases, migrant farm workers. The income in this community was at the poverty line level.

Table 33. Significant Differences between Ethnic Groups with Respect to Reading Scores

	A	N	O	M
Anglo (N=109)	3.10	---	.042	.000
Negro (N=0)	---	---	---	---
Oriental (N=167)	O>A	---	3.42	.000
Mexican-American (N=101)	A>M	---	O>M	2.15

The mean reading scores for both Orientals and Anglos were above the 2.7 expected. The mean for Mexican-American children was below the state norm. More interesting, however, is the fact that Orientals scored significantly higher than Anglos despite the fact that they were in the same schools and within those schools were in the same classes.

The results of ethnic comparisons using reading scores calculated free of grade level are presented in Table 34. The reader should be aware that in this ethnic analysis, unlike others, all children for whom reading scores were available are included. The small sample of Negro children (N=20) was drawn for the most part from among the Anglo-Oriental schools. Some Mexican-Americans were also drawn from these schools so that in addition to the 101 Oxnard Mexican-American children, there are 58 from more integrated schools.

Only one difference is nonsignificant: that between Negroes and Mexican-Americans. Orientals had higher reading scores than any other ethnic group and were followed by Anglos. The mean for Mexican-Americans was higher than that for Negroes (although, as stated, not significantly higher). Both Anglos and Orientals were above their grade level.

Table 34. Differences between Adjusted Reading Scores by Ethnic Group

<u>Comparison</u>	<u>N₁</u>	<u>N₂</u>	<u>M₁</u>	<u>M₂</u>	<u>t</u>	<u>p</u>	<u>Direction</u>
Anglo <u>vs</u> Negro	112	20	.247	-.650	- 3.64	.000	A>N
Anglo <u>vs</u> Oriental	112	167	.247	.555	2.40	.017	O>A
Anglo <u>vs</u> Mex-Am.	112	159	.247	-.596	- 7.74	.000	A>M
Negro <u>vs</u> Oriental	20	167	-.650	.555	5.05	.000	O>N
Negro <u>vs</u> Mex-Am.	20	159	-.650	-.596	.31	ns	
Oriental <u>vs</u> Mex-Am.	167	159	.555	-.596	-11.50	.000	O>M

Both Negroes and Mexican-Americans were below.¹ The reader should bear in mind that these Negro children were attending classes in which they were mixed primarily with Anglos and Orientals and that the general composition of the school neighborhoods was middle-or upper middle class. On the other hand, the Mexican-American sample was predominantly from a lower or lower-middle class neighborhood and most of the children were first-generation Americans. Since there is no way to generalize these results, it is suggested that more intensive efforts be made to determine to what extent integration might effect the achievement of minority groups.

Factor Scores

Table 35 shows the significant differences found between ethnic groups with respect to factor scores on pre- and posttest. Groups are designated as follows: Anglo, A; Negro, N; Oriental, O; Mexican-American, M. Again, diagonals contain means, p levels of significant t ratios appear above the diagonal, and the directions of significant differences appear below the diagonal. Results indicate that:

1. Pretest and posttest differences were the same with respect to Me First in that both Negroes and Mexican-Americans scored higher than either Anglos or Orientals. Negroes did not differ significantly from Mexican-Americans in this value nor did Anglos differ significantly from Orientals. The posttest mean for Orientals was lower than was their pretest mean and the same was true for Anglos, to a lesser extent. On the other hand, Mexican-Americans became much more selfish and dominant while Negroes seemed to stay the same.
2. In pretest Anglos scored significantly higher than Orientals in Masculinity. By the end of eight months they scored higher than any other group.
3. Orientals scored lower than any other group in pretest and lower than Mexican-Americans and Negroes in posttest when it comes to approving of asocial acts. Mexican-Americans were higher in Asocial than either Anglos or Orientals in both pre- and posttest. The major difference was that Anglos dropped and Orientals rose sufficiently so that they were no longer as different in posttest.
4. In pretest Anglos were lower than either Orientals or Mexican-Americans in liking for Academic values. By posttest they were also lower than Negroes. This waning interest among Anglos in school-related activities has been noted in other analyses and it should also be noted that both Orientals and Mexican-Americans increased in Academic value while the Anglos and Negroes decreased.

¹The figures may be interpreted in terms of the portion of the year (i. e., Orientals scored more than half a year ahead of their grade level; Mexican-Americans scored more than half a year behind).

Table 35. Significant Differences between Ethnic Groups with Respect to Factor Scores on Pre- and Posttest
(A: N=109; N: N=98; O: N=167; M: N=101)

	Me First-Pretest				Me First-Posttest			
	A	N	O	M	A	N	O	M
A	-.106	.015	ns	.039	-.066	.039	ns	.003
N	N>A	.179	.002	ns	N>A	.182	.001	ns
O		N>O	-.138	.008		N>O	-.194	.000
M	M>A		M>O	.136	M>A		M>O	.276

	Masculinity-Pretest				Masculinity-Posttest			
	A	N	O	M	A	N	O	M
A	.125	ns	.008	ns	.328	.002	.000	.006
N		-.045	ns	ns	A>N	-.031	ns	ns
O	A>O		-.112	ns	A>O		-.161	ns
M				.019	A>M			.007

	Asocial-Pretest				Asocial-Posttest			
	A	N	O	M	A	N	O	M
A	-.092	ns	.011	.020	-.107	ns	ns	.002
N		.121	.000	ns		.104	.000	ns
O	A>O	N>O	-.297	.000		N>O	-.267	.000
M	M>A		M>O	.166	M>A		M>O	.249

Table 35. Continued

		Academic- Pretest				Academic- Posttest			
	A	N	O	M	A	N	O	M	
	-.161	ns	.019	.000	-.347	.002	.000	.000	
	N	.050	ns	ns	N > A	.015	ns	ns	
	O	O > A	.035	ns	O > A	.161	ns	ns	
	A	N	O	M	A	N	O	M	
	M > A	.035	.035	.196	M > A			.252	
		Adult Closeness- Posttest				Adult Closeness- Posttest			
	A	N	O	M	A	N	O	M	
	.106	ns	.009	ns	.111	ns	.032	ns	
	N	.017	ns	ns	N	-.038	ns	ns	
	O	A > O	-.155	ns	O	A > O	-.117	.029	
	A	N	O	M	A	N	O	M	
	M			-.044	M	M > O	.111	.111	
		Sociability- Pretest				Sociability- Posttest			
	A	N	O	M	A	N	O	M	
	-.015	ns	ns	ns	-.013	ns	ns	ns	
	N	.016	ns	ns	N	-.027	ns	ns	
	O		-.007	ns	O		-.001	ns	
	A	N	O	M	A	N	O	M	
	M			-.003	M			-.061	
		Social Conformity- Pretest				Social Conformity- Posttest			
	A	N	O	M	A	N	O	M	
	.027	ns	.006	.039	.008	ns	.012	.038	
	N	-.116	.000	ns	N	-.038	.004	ns	
	O	O > A	.252	.000	O	O > N	.197	.000	
	A	N	O	M	A	N	O	M	
	M	A > M	O > M	-.189	M	A > M	O > M	-.227	

5. Orientals were lowest of all in liking for physical closeness to adults, a finding noted in the previous year's research. In pretest they were significantly lower only than Anglos. In posttest they were significantly lower than both Anglos and Mexican-Americans.
6. There were no significant differences between ethnic groups with respect to Sociability in either pre- or posttest. They were all about "average" (i. e., had mean factor scores close to zero).
7. In both pre- and posttest Orientals were highest in Social Conformity. Mexican-Americans were less conforming than either Orientals or Anglos. Negroes are the only group for which the mean on this factor increased. For all others it was lower in posttest and this was particularly true for the Mexican-Americans.

Factor Score Changes

Table 36 shows the differences between ethnic groups with respect to factor score changes. Results indicate that:

1. Mexican-Americans changed more than predicted (in the direction of scoring high) on Me First than did either Anglos or Orientals and Orientals changed more (in the direction of scoring low) than did either Negroes or Mexican-Americans. The direction of change for Negroes and Mexican-Americans was positive (higher scores); for Anglos and Orientals it was negative.
2. Anglos changed significantly more (in the direction of scoring higher) in Masculinity than did any other group. They were the only group to raise their scores significantly on this factor.
3. Mexican-Americans changed in Asocial values significantly more than did either Anglos or Orientals and Negroes changed significantly more than did Orientals. The direction of change for Mexican-Americans and Negroes was in the direction of higher scores; for Anglos and Orientals it was in the opposite direction.
4. Anglos' factor scores on Academic became lower and the change significantly differentiated them from Negroes, who also declined slightly in Academic value, and from both Mexican-Americans and Orientals who increased in this value.
5. No significant differences appeared in Adult Closeness or Sociability factor score changes despite the fact that Orientals seemed, in the factor score comparison, to decrease in the former value.
6. Orientals changed significantly more in the direction of lower scores than predicted on Social Conformity than did Mexican-Americans. Mexican-Americans also changed in the direction of non-conformity, but since their pretest factor scores were already low, their change was not as notable as was that for the Orientals.

Table 36. Significant Differences between Ethnic Groups with Respect to Factor Score Changes (A: N=109; N: N=98; O: N=167; M: N=101)

<u>Me First</u>					<u>Masculinity</u>				
	A	N	O	M		A	N	O	M
A	-.013	ns	ns	.026	A	.268	-.007	.000	.009
N		.091	.030	ns	N	A > N	-.009	ns	ns
O		N > O	-.125	.000	O	A > O		-.107	ns
M	M > A		M > O	.208	M	A > M			-.002
<u>Asocial</u>					<u>Academic</u>				
	A	N	O	M		A	N	O	M
A	-.062	ns	ns	.031	A	-.282	.008	.000	.000
N		.045	.048	ns	N	N > A	-.006	ns	ns
O		N > O	-.123	.001	O	O > A		.147	ns
M	M > A		M > O	.168	M	M > A			.173
<u>Adult Closeness</u>					<u>Sociability</u>				
	A	N	O	M		A	N	O	M
A	.061	ns	ns	ns	A	.010	ns	ns	ns
N		-.046	ns	ns	N		-.031	ns	ns
O			-.044	ns	O			.000	ns
M				.132	M				-.060
<u>Social Conformity</u>									
	A	N	O	M					
A	.000	ns	ns	ns					
N			ns	ns					
O			-.126	.000					
M			O > M	-.173					

Teacher-Child Congruities

Table 37 shows the ethnic comparisons with respect to value congruities between teachers and children.

Table 37. Significant Differences between Ethnic Groups with Respect to Teacher-Child Congruities (A: $N=109$; N: $N=98$; O: $N=167$; M: $N=101$)

Pretest					Posttest				
	A	N	O	M		A	N	O	M
A	.273	.037	ns	.022	A	.227	ns	.000	ns
N	A>N	.196	.000	ns	N		.219	.000	ns
O		O>N	.333	.000	O	O>A	O>N	.397	.000
M	A>M		O>M	.196	M			O>M	.235

Anglos and Orientals were more like their teachers in pretest than were either Negroes or Mexican-Americans. In posttest the Anglo had become less like his teacher than he was while all other groups became more like her. Consequently, the Oriental at posttest was significantly more like his teacher than was any other group member. Anglos grew away from teachers, probably because of lessening interest in school-related matters and increasing masculine values, two of the three values most heavily weighted in congruity measures.

Teacher-Child Congruity Changes

The group with the greatest degree of change, above that predicted, and in the direction of the teacher, was the Oriental ($M=.072$) while Anglos changed in the opposite direction. Means were as follows: Anglos, $-.067$; Negroes, $.035$; Mexican-Americans, $.019$. The results of t tests revealed that the Orientals were significantly different from the other three groups with respect to change and this difference occurred despite the fact that Orientals were significantly more congruent with teachers than were Negroes or Mexican-Americans in pretest.

Graphic Representation of Reading Scores, Factor Scores, and Teacher-Child Congruities for Pre- and Posttest Samples are presented in Appendix F.

Relationships between Values and Criteria

Ratings-Total Group

Each rating was to serve as a criterion for which factor scores were assumed to be predictors. In the section concerning the revision of the VIC (Chapter IV), relationships between contrived

dimension "scores" and ratings were obtained. Here, the inter-correlations of each rating with each factor score are presented for pretest in Table 38 and for posttest in Table 39.

Ratings of the original dimensions of the test were expected to correlate with the factor scores for those dimensions. Since items measuring Health Habits and Aesthetics were eliminated, the relevance of these ratings is questionable and, indeed, in pretest they did not relate to any factor dimension. In posttest the Health Habits rating seemed to be positively related to factor scores on Me First and Social Conformity although the relationships were significant only at the .05 level. Aesthetic rating on posttest was positively related to both Adult Closeness and Sociability factor scores.

When it came to other ratings of existing dimensions corresponding to the factor scores of children rated on these dimensions, the results from pretest were far less satisfactory than were those from posttest. In pretest, as seen in Table 38, the only appropriate significant relationships were between (1) Masculinity rating and Masculinity factor score; (2) Social Conformity rating and Social Conformity factor score; and (3) Me First rating and Me First factor score. The masculinity relationship was to be expected since the factor score was so profoundly sex-bias laden and the rating was based on the sex of the child.

In posttest more appropriate relationships were found. Adult Closeness ratings were positively associated with Adult Closeness factor scores; Asocial Behavior ratings were positively related to Asocial factor scores; and the relationships for the previously associated ratings and scores (i. e., Masculinity, Social Conformity, and Me First) increased in magnitude.

In addition to the above findings, the following summarizes the other relationships between ratings (as criteria) and factor scores (as predictors):

1. In pretest, Me First factor scores were positively related to ratings of Masculinity. In posttest, they were positively related only to ratings of Health Habits and Academic Motivation.
2. In pretest, Masculinity factor scores were positively related to ratings of Me First and Asocial Behavior and negatively related to ratings of Adult Closeness, Social Conformity, good Classroom Behavior, good Peer Relations, and Satisfactoriness. In posttest the significant relationships were positive with Asocial Behavior and Me First and negative with Academic Motivation, Adult Closeness, Social Conformity, Academic Ability, good Classroom Behavior, good Peer Relations, and Satisfactoriness.
3. In pretest, Asocial factor scores were negatively related to ratings of Social Conformity, Academic Ability, and good Classroom Behavior. ~~In posttest, they retained these relationships at an increased level and also acquired negative relationships with good~~

Table 38. Intercorrelations of Ratings and Factor Scores
from Pretest (N=611)

Ratings	Me 1st	Masc.	Asocial	Academic	Ad. Close.	Sociab.	Soc. Conform.
Sociability	.020	-.021	-.025	.056	.074	-.008 ^a	.060
Health Habits	-.004	-.052	-.008	-.004	.024	-.070	.023
Academic Motivation	.033	-.064	-.011	.069	.114**	.020	.112**
Adult Closeness	-.036	-.088*	.021	.031	.071	.029	-.059
Asocial Behavior	-.029	.120**	.008	-.026	-.017	-.022	-.041
Aesthetic	-.057	.027	-.019	.020	.080	-.018	.067
Social Conformity	-.030	-.146**	-.084*	.003	.042	.056	.100**
Masculinity	.095*	.321**	.042	-.008	-.225**	-.035	-.046
Me First	.090*	.086*	.062	.076	-.007	-.003	-.055
Academic Ability	-.015	-.081	-.089*	.033	.082	.034	.177**
Classroom Behavior	-.041	-.192**	-.129**	.053	.040	.053	.147**
Peer Relations	-.044	-.084*	-.066	.090*	.024	.031	.093*
Satisfactoriness	.077	-.128**	-.068	.021	.064	.069	.110**

a Correlations between factor scores and corresponding ratings are underlined

* $r = .083$; $p < .05$

** $r = .108$; $p < .01$

Table 39. Intercorrelations of Ratings and Factor Scores from Posttest (N=611)

<u>Ratings</u>	<u>Me 1st</u>	<u>Masc.</u>	<u>Asocial</u>	<u>Academic</u>	<u>Ad. Close.</u>	<u>Sociab.</u>	<u>Soc. Conform.</u>
Sociability	.082	.042	-.062	-.043	.069	<u>.007^a</u>	.032
Health Habits	.093*	-.048	-.031	-.062	-.006	.056	.086*
Academic Motivation	.097*	-.089*	-.061	<u>.059</u>	.087*	.014	.083*
Adult Closeness	-.022	-.130**	.037	.027	<u>.133**</u>	.108**	-.025
Asocial Behavior	.017	.141**	<u>.104*</u>	-.036	-.068	-.035	-.102*
Aesthetic	-.005	-.050	-.017	-.056	.128**	.084*	.013
Social Conformity	-.005	-.146**	-.136**	.068	.082	.034	<u>.206**</u>
Masculinity	.046	<u>.412**</u>	.052	-.048	-.255**	-.201**	-.167**
Me First	<u>.113**</u>	.159**	.071	.016	.027	.020	-.095*
Academic Ability	.023	-.098*	-.132**	-.009	.068	.071	.075
Classroom Behavior	-.059	-.232**	-.157**	.077	.073	.060	.168**
Peer Relations	-.017	-.085*	-.125**	.038	.045	-.005	.149**
Satisfactoriness	.011	-.169**	-.118**	.004	.090*	.015	.106*

^a Correlations between factor scores and corresponding ratings are underlined

* $r = .083$; $p < .05$

** $r = .108$; $p < .01$

~~Classroom Behavior~~. In posttest, they retained these relationships at an increased level and also acquired negative relationships with good Peer Relations and Satisfactoriness.

4. In pretest, Academic factor scores were related only to good Peer Relations, in the positive direction. In posttest, even this relationship disappeared and no others were established.
5. In pretest, Adult Closeness factor scores were positively related to ratings of Academic Motivation and negatively related to ratings of Masculinity. In posttest, the positive relationship to Academic Motivation decreased but remained significant and positive relationships appeared with Aesthetic ratings as well as with Satisfactoriness. The negative relationship with Masculinity increased.
6. In pretest, Sociability factor scores bore no significant relationships to any ratings. In posttest they acquired a positive relationship to ratings of Adult Closeness and Aesthetic and a relatively high negative relationship to Masculinity ratings.
7. In pretest, Social Conformity factor scores were positively related to ratings of Academic Motivation, Academic Ability, good Classroom Behavior, good Peer Relations, and Satisfactoriness. In posttest these positive relationships remained (with the exception of Academic Ability) and, in addition, scores were positively related to ratings of Health Habits and negatively related to ratings of Asocial Behavior, Masculinity, and Me First.

It would seem that when it comes to predicting ratings from factor scores, the manner in which the child responds to value dimensions does not relate well to the manner in which the teacher perceives him. This is particularly true in pretest. The best predictors of adjustment to school (Classroom Behavior and Peer Relations) were factor scores on Asocial and Social Conformity. This is not to discount the correlations of Masculinity factor scores with rating criteria but it is to be remembered that boys scored very high on this factor while girls scored very low and the teacher tended to provide a Masculinity rating in accordance with the sex of the child. In addition, teachers rated girls higher on all desirable dimensions and boys higher on all undesirable ones.

With respect to Satisfactoriness, teachers tended to like children who scored low on Masculinity (were girls), low on Asocial, and high on Social Conformity. They also rated these children higher on Classroom Behavior.

It was unfortunate that liking for Academic activities seemed unrelated to any rating criteria except, possibly, good Peer Relations in pretest.

Reading Scores - Total Group

The correlations between factor scores on each of the seven dimensions of value at pre- and posttest with reading scores are provided in Table 40.

Table 40. Correlations between Factor Scores and Reading Scores for Pre- and Posttest (N=465)

	Pretest	<u>p</u>	Posttest	<u>p</u>
	<u>r</u>		<u>r</u>	
Me First	-.100	<.05	-.089	ns
Masculinity	-.039	ns	-.051	ns
Asocial	-.119	<.05	-.209	<.01
Academic	.018	ns	.027	ns
Adult Closeness	.006	ns	.015	ns
Sociability	-.029	ns	.010	ns
Social Conformity	.132	<.01	.129	<.01

r = .093; p < .05

r = .122; p < .01

The only two value dimensions consistently relating to achievement were Asocial (negatively) and Social Conformity (positively). On pretest Me First bore a negative relationship which no longer attained significance on posttest.

Ratings - by Sex

When the relationship between ratings and values were computed for boys and girls separately, posttest¹ results were as follows:

1. Boys scoring high in Me First were rated high in Sociability, Health Habits, and Academic Motivation but low in Adult Closeness. Girls high in this value were rated high in Me First characteristics.
2. Boys scoring high in Asocial value were rated high in Asocial Behavior and low in Social Conformity, Academic Ability, and Peer Relations. Girls high in Asocial value were rated low in Academic Ability, Classroom Behavior, Peer Relations, and Satisfactoriness.
3. Boys scoring high in Academic value were rated low in Health Habits. Girls high in Academic value were rated high in Academic Motivation.

¹For analyses by sex, grade, and ethnic group only posttest results are supplied and, in most cases are simply summarized for those relationships significant at p < .05

4. The Adult Closeness value did not relate to any rating for boys. For girls, it was positively related to the Aesthetics rating.
5. Boys scoring high in Sociability value were rated high in Aesthetics and Masculinity. Girls were rated low in Masculinity (i. e., high in femininity).
6. Boys scoring high in Social Conformity value were rated high in Health Habits, Social Conformity, and Academic Ability. Girls scoring high in Social Conformity were rated high in Social Conformity, Academic Ability, Classroom Behavior, Peer Relations, and Satisfactoriness. They were rated low in Masculinity.
7. The scores of boys on Masculinity value did not relate to any rating. Girls' scores on this value were negatively related to the rating of Social Conformity and positively related to the ratings of Masculinity and Me First.

Reading Scores - by Sex

Posttest correlations of factor scores with reading scores for boys and girls separately showed that, for both sexes, Asocial scores were negatively related to achievement. For the 218 males for whom reading scores were available, the correlation was $-.183$, significant at the $.01$ level. For the 247 girls, the correlation was $-.220$, also significant at the $.01$ level. The only other relationship that was significant ($p < .05$) was between the Social Conformity scores of girls and their reading scores ($r = .135$).

Reading Scores- by Grade

Although factor scores were correlated with all ratings for each of the three grades separately, there was nothing particularly notable about the differences. However, the relationships between factor scores and reading scores were worth presenting. They appear in Table 41.

None of the relationships appeared consistently throughout the three grades. Social Conformity values seemed to bear some relationship to achievement in grades one and two but not in grade three. Me First values, on the other hand, bore no relationship to achievement in grades one or two but in grade three they were negatively related. In grades two and three, Asocial values were negatively related to achievement; in grade one the relationship was non-significant.

Ratings - by Ethnic Group

When the posttest values (factor scores) of children in the four ethnic groups were separately correlated with ratings, the results were as follows:

Table 41. Correlations between Reading Scores and Factor Scores by Grade on Posttest

Factors	Grade 1 a		Grade 2 b		Grade 3 c	
	$\underline{r^*}$	$\underline{p}$	$\underline{r^{**}}$	$\underline{p}$	$\underline{r^{**}}$	$\underline{p}$
Me First	-.051	ns	-.012	ns	-.258	<.01
Masculinity	-.052	ns	-.078	ns	-.013	ns
Asocial	-.072	ns	-.380	<.01	-.300	<.01
Academic	.045	ns	-.005	ns	.013	ns
Adult Closeness	.062	ns	.000	ns	-.022	ns
Sociability	.157	ns	-.099	ns	.070	ns
Social Conformity	.188	<.05	.212	<.05	.077	ns

a N=132 $\underline{r^*}=.169$; $\underline{p}<.05$ $\underline{r}=.221$; $\underline{p}<.01$

b N=133 $\underline{r^{**}}=.169$; $\underline{p}<.05$ $\underline{r}=.221$; $\underline{p}<.01$

c N=200 $\underline{r^{***}}=.138$; $\underline{p}<.05$ $\underline{r}=.181$; $\underline{p}<.01$

1. Me First Value:

- (a) Anglos: Positive relationship to Masculinity rating; negative relationship to Adult Closeness rating.
- (b) Negroes: No significant relationships
- (c) Orientals: Positive relationships to Sociability and Me First ratings; negative relationship to Classroom Behavior rating.
- (d) Mexican-Americans: No significant relationships.

2. Masculinity Value:

- (a) Anglos: Positive relationship to Masculinity rating; negative relationship to rating of Classroom Behavior.
- (b) Negroes: Positive relationship to Asocial Behavior, Masculinity, and Me First ratings; negative relationship to Health Habits rating.
- (c) Orientals: Positive relationship to Masculinity rating.
- (d) Mexican-Americans: Positive relationship to Asocial Behavior, Masculinity, and Me First ratings; negative relationship to Academic Motivation, Adult Closeness, Academic Ability, Classroom Behavior, and Satisfactoriness ratings.

3. Asocial Value:

- (a) Anglos: Negative relationship to Classroom Behavior rating.
- (b) Negroes: No significant relationships.
- (c) Orientals: Negative relationship to Peer Relations and Satisfactoriness ratings.
- (d) Mexican-Americans: Negative relationship to Social Conformity rating.

4. Academic Value:

- (a) Anglos: Negative relationship to Health Habits rating.
- (b) Negroes: Negative relationship to Health Habits and Classroom Behavior ratings; positive relationship to Me First rating.
- (c) Orientals: No significant relationships.
- (d) Mexican-Americans: Positive relationship to Academic Motivation rating.

5. Adult Closeness Value:

- (a) Anglos: Negative relationship to Masculinity rating; positive relationship to Adult Closeness rating.
- (b) Negroes: Negative relationship to Masculinity rating; positive relationship to Academic Motivation rating.
- (c) Orientals: Negative relationship to Masculinity rating; positive relationship to Social Conformity and Peer Relations ratings.
- (d) Mexican-Americans: Negative relationship to Masculinity rating; positive relationship to Academic Motivation, Adult Closeness, Aesthetics, and Academic Ability ratings.

6. Sociability Value:

- (a) Anglos: Negative relationship to Masculinity rating.
- (b) Negroes: Negative relationship to Masculinity rating; positive relationship to ratings of Aesthetics and Academic Ability.
- (c) Orientals: No significant relationships.
- (d) Mexican-Americans: Negative relationship to Masculinity rating; positive relationship to ratings of Health Habits, Aesthetics, Academic Ability, and Satisfactoriness.

7. Social Conformity Value:

- (a) Anglos: Positive relationship to Sociability rating.
- (b) Negroes: Negative relationship to ratings of Adult Closeness and Masculinity.
- (c) Orientals: Positive relationships to ratings of Social Conformity and Peer Relations; negative relationships to Masculinity and Me First ratings.
- (d) Mexican-Americans: Positive relationships to ratings of Social Conformity, Classroom Behavior, and Peer Relations; negative relationship to Masculinity and Asocial Behavior ratings.

Reading Scores - by Ethnic Group

When posttest factor scores were correlated with reading scores for those ethnic groups for whom reading scores were available (i. e., Anglos, Orientals, and Mexican-Americans), only one significant relationship was found: a negative relationship between Anglo Asocial scores and achievement ($r = -.193$; $p < .05$).

Relationships between Value Changes and Criteria

Ratings-Total Group

The examination of the intercorrelations between factor scores and ratings on pre- and posttest showed that, particularly on posttest, teachers did tend to rate children higher in desirable dimensions when they scored higher in some of these and lower when they scored lower. Whether or not they would do so if the child changed from pre- to posttest was examined by intercorrelating all ratings with change factor scores as shown in Table 42.

Table 42. Intercorrelations of Ratings and Change Factor Scores (N=611)

<u>Ratings</u>	<u>Factor Change Scores</u>						
	Me 1st	Masc.	Asoc.	Acad.	Ad. Close.	Sociab.	Soc. Conf.
Sociability	.083*	.057	-.057	-.071	.041	.009	.015
Health Habits	.109**	-.027	-.030	-.066	-.019	.074	.082
Academic Motivation	.093*	-.067	-.067	.034	.041	.009	.053
Adult Closeness	-.006	-.101	.031	.017	.114**	.104*	-.008
Asocial Behavior	.035	.097*	.113**	-.028	-.068	-.031	-.094*
Aesthetic	.025	-.070	-.009	-.069	-.104**	-.091*	-.007
Social Conformity	-.001	-.089*	-.110**	.075	.071	.022	.184**
Masculinity	.000	.299**	.037	-.049	-.174**	.198**	-.161**
Me First	.079	.134**	.048	-.015	.034	.021	.082
Asocial Ability	.034	-.069	-.102*	-.024	.035	.065	.024
Classroom Behavior	-.045	-.163**	-.109**	.061	.062	.049	.130**
Peer Relations	-.005	-.052	-.107*	.003	.038	-.013	.128**
Satisfactoriness	.009	-.124**	-.098*	-.005	.069	-.001	.077

* $r = .083$; $p < .05$

** $r = .108$; $p < .01$

It must be remembered that these scores are independent of original factor scores in the sense that they represent change above and beyond that predicted. The pattern of Table 42 is much the same as that for Table 39. Intercorrelations of Ratings and Factor Scores from Posttest, in that the signs are in the same direction for all significant correlations. The results show that:

1. Increasing Me First values were positively related to ratings of Sociability, Health Habits, and Academic Motivation.
2. Increasing Masculinity values were positively related to ratings of Masculinity, Asocial Behavior, and Me First, and negatively related to ratings of Adult Closeness, Social Conformity, good Classroom Behavior, and Satisfactoriness.
3. Increasing Asocial values were positively related to the Asocial rating and negatively related to ratings of Social Conformity, Academic Ability, Classroom Behavior, Peer Relations, and Satisfactoriness.
4. Changes in Academic values were not significantly related to any ratings.
5. Increasing Adult Closeness values were positively related to the Adult Closeness and Aesthetic ratings and negatively related to the rating of Masculinity.
6. Increasing Sociability values were positively related to Adult Closeness and Aesthetic ratings and negatively related to the Masculinity rating.
7. Increasing Social Conformity values were positively related to ratings of Social Conformity, Classroom Behavior, and Peer Relations and negatively related to ratings of Asocial Behavior and Masculinity.

As with all such relationships, it is impossible to determine whether the children changed in their values because the teacher viewed them favorably (or unfavorably) or whether the teacher's perception of them was based in part on the changes in their values.

Reading Scores -Total Group

Table 43 shows the extent to which changes in values above and beyond those predicted were related to achievement.

Table 43. Correlations between Reading Scores and Change Factor Scores (N=465)

	<u>r</u>	<u>p</u>
Me First	-.047	ns
Maculinity	-.038	ns
Asocial	-.169	<.01
Academic	.022	ns
Adult Closeness	.014	ns
Sociability	.017	ns
Social Conformity	.093	<.05

r = .093; p < .05
r = .122; p < .01

Only two changes were related to achievement and the relationships are in opposite directions. Increased Asocial value was negatively related to reading scores; increased Social Conformity was positively related. As in previous analyses of value change, it must be remembered that children did not change much in any other dimensions and that an eight month period is not one in which much change can be expected.

Ratings-by Sex

When boys and girls were evaluated separately with respect to relationships between value change and ratings, the first notable aspect was that directions of change for the two groups were opposite with respect to every value. When boys increased in a given value, girls decreased and vice versa. Not all of these changes were significant however. The means were presented, as were significance tests, in the sex comparison section.

The following summarizes the significant ($p < .05$) relationships:

1. The greater the decrease in Me First value, the higher boys were rated in Health Habits. The greater the increase in Me First value, the higher girls were rated in Me First.
2. The greater the increase in Masculinity value, the lower the boys were rated in Aesthetics. The greater the decrease in Masculinity value, the lower the girls were rated in Masculinity.
3. The greater the decrease in Asocial value, the lower the boys were rated in Asocial Behavior and the higher they were rated in Peer Relations. The greater the increase in Asocial value, the lower girls were rated in Academic Ability, Classroom Behavior and Satisfactoriness.
4. The greater the increase in Academic value, the higher boys were rated in Academic Motivation. The greater the decrease in Academic value, the lower girls were rated in Academic Motivation.
5. Changes in Adult Closeness were not related to any ratings for boys. The more girls increased in this value the higher they were rated in Aesthetics.
6. The greater the decrease in Sociability value, the lower boys were rated in Health Habits and Aesthetics. The greater the increase in Sociability, the lower girls were rated in Masculinity.
7. The greater the decrease in Social Conformity value, the lower boys were rated in Health Habits, Social Conformity, and Peer Relations and the higher they were rated in Asocial Behavior. For girls the only significant relationship with increasing Social Conformity was a positive one with Social Conformity rating.

Reading Scores-by Sex

The only value change related significantly to reading scores were those for Asocial. For the boys the correlation was $-.164$ ($p < .05$); for girls it was $-.166$ ($p < .01$). Increasing liking for asocial activities was negatively associated with achievement to this extent.

Reading Scores-by Grade

Relationships calculated between value changes and ratings by grade revealed little of interest. When reading scores were correlated with changes in factor scores, there were no significant relationships in the first grade. In the second grade, Asocial increase was negatively related to achievement ($r = -.372$; $p < .01$ for an N of 133). In the third grade, decrease in Asocial value was also significantly related to reading ($r = .190$; $p < .01$ for an N of 200) as was increasing Me First value ($r = -.204$; $p < .01$).

Ratings by Ethnic Group

When change factor scores were correlated with ratings for each ethnic group, the results were as follows:

1. Me First Value Change:

- (a) Anglos: Increase negatively related to Adult Closeness rating.
- (b) Negroes: Increase negatively related to Health Habits rating.
- (c) Orientals: Increase negatively related to Classroom Behavior rating.
- (d) Mexican-Americans: Increase positively related to Masculinity rating.

2. Masculinity Value Change:

- (a) Anglos: Increase positively related to ratings of Masculinity and negatively to ratings of Classroom Behavior, Peer Relations, and Satisfactoriness.
- (b) Negroes: Increase positively related to ratings of Masculinity and Me First.
- (c) Orientals: Increase positively related to Masculinity rating.
- (d) Mexican-Americans: Increase positively related to ratings of Masculinity, Asocial Behavior, and Me First and negatively to ratings of Adult Closeness, Classroom Behavior, and Satisfactoriness.

3. Asocial Value Change:

- (a) Anglos: Increase negatively related to Satisfactoriness.
- (b) Negroes: Increase unrelated to any rating.
- (c) Orientals: Increase negatively related to ratings of Sociability, Peer Relations, and Satisfactoriness.
- (d) Mexican-Americans: Increase negatively related to rating of Social Conformity.

4. Academic Value Change:

- (a) Anglos: Increase negatively related to Masculinity rating.
- (b) Negroes: Increase negatively related to rating of Asocial Behavior and positively to rating of Satisfactoriness.
- (c) Orientals: Increase positively related to ratings of Social Conformity, Classroom Behavior, and Satisfactoriness and negatively to rating of Sociability.
- (d) Mexican-Americans: Increase positively related to rating of Academic Motivation.

5. Adult Closeness Value Change:

- (a) Anglos: Increase positively related to Adult Closeness rating and negatively to Masculinity rating.
- (b) Negroes: Increase negatively related to Masculinity rating.
- (c) Orientals: Increase negatively related to Masculinity rating.
- (d) Mexican-Americans: Increase positively related to ratings of Academic Motivation, Adult Closeness, and Aesthetics and negatively to Masculinity.

6. Sociability Value Change:

- (a) Anglos: Increase negatively related to Masculinity rating.
- (b) Negroes: Increase negatively related to Masculinity rating and positively to rating of Academic Ability.
- (c) Orientals: No significant relationships.
- (d) Mexican-Americans: Increase negatively related to Masculinity and positively to Satisfactoriness.

7. Social Conformity Value Change:

- (a) Anglos: Increase positively related to Sociability rating.
- (b) Negroes: Increase negatively related to Masculinity rating.
- (c) Orientals: Increase negatively related to Masculinity rating and positively to rating of Peer Relations.
- (d) Mexican-Americans: Increase negatively related to ratings of Asocial Behavior and Me First and positively to ratings of Social Conformity, Classroom Behavior, and Peer Relations.

Reading Scores-by Ethnic Group

In only one case was a change in a factor score significantly related to reading scores. For Orientals, increasing Asocial value was negatively related to achievement. The correlation was $-.153$, significant at the $.05$ level.

Relationships between Values and Teacher-Child Congruities

Since it is responses to items that determine teacher-child congruities and since these responses also determine factor scores on value dimensions, the purpose of relating factor scores to congruities is simply to identify those factors weighing most heavily in the establishment of congruities. Thus, two preliminary analyses were performed. First, high-congruity children ($N=140$) were compared with low congruity children ($N=96$) on the basis of pre- and posttest factor scores by computing t ratios. The results are shown in Table 44. Second, stepwise multiple regressions between factor scores and congruities were computed. Results appear in Table 45.

The results were as expected. In pretest the only nondifferentiating factors were Adult Closeness and Sociability. The most important differences occurred with respect to Asocial and Social Conformity followed by Masculinity and Academic. Me First differentiated but not nearly as well as the aforementioned factors. In posttest all factors differentiated. Largest differences were for Asocial, Academic, and Masculinity. Social Conformity and Me First also differentiated and the t ratios for Adult Closeness and Sociability became significant. In every case the high-congruity children had the high factor scores on "desirable" (socialized) dimensions while low-congruity children had the high scores on "undesirable" dimensions. Once again, Masculinity played a major role but not the most important one.

In the multiple regression analyses (Table 45), the first three factors of Asocial, Academic, and Masculinity sufficed for accounting for congruities in pretest and were first-ranked in posttest.

Table 44. Significant Differences in Factor Scores between High-Posttest-Congruity Children (N=140) and Low-Posttest-Congruity Children (N=96)

Factor	Pretest					Posttest				
	<u>M_H</u>	<u>M_L</u>	<u>t</u>	<u>p</u>	<u>Dir.</u>	<u>M_H</u>	<u>M_L</u>	<u>t</u>	<u>p</u>	<u>Dir.</u>
Me First	-.228	.030	-2.35	.020	L>H	-.330	.244	-5.14	.000	L>H
Masculinity	-.264	.353	-6.40	.000	L>H	-.402	.520	-9.59	.000	L>H
Asocial	-.316	.346	-6.99	.000	L>H	-.474	.856	-16.54	.000	L>H
Academic	.161	-.264	4.55	.000	H>L	.352	-.605	11.01	.000	H>L
Adult Closeness	.055	.035	.19	ns		.145	-.243	3.58	.000	H>L
Sociability	.035	-.086	1.27	ns		.159	-.195	3.90	.000	H>L
Social Conformity	.231	-.426	6.81	.000	H>L	.160	-.532	6.89	.000	H>L

Table 45. Stepwise Multiple Regression of Factor Scores as Related to Teacher-Child Congruities on Pre- and Posttest (N=611)

Pretest Factor Score	Pretest		Posttest Factor Score	Posttest	
	<u>R</u>	<u>r</u>		<u>R</u>	<u>r</u>
Asocial	.598	-.598**	Asocial	.562	-.562**
Academic	.701	.407**	Academic	.675	.424**
Masculinity	.761	-.369**	Masculinity	.761	-.408**
			Me First	.783	-.241**
			Adult Closeness	.797	.147**
			Sociability	.808	.180**
			Social Conformity	.819	.301**

**r=.108; p<.01

Surprisingly, Adult Closeness played a significant role in the posttest regression equation. Teacher-child congruities, then, are based primarily on responses to items measuring Asocial, Academic, and Masculine values with the low-scoring Asocial and Masculine and high-scoring Academic child being most like the teacher.

Although playing no significant role in the pretest multiple regression formula, the relationships between the remaining variables and congruities were as follows: (a) Social Conformity, .347 (b) Me First, -.222; (c) Sociability, .103; (d) Adult Closeness, .093. All were significant beyond the .05 level.

Because it was suggested that the relationships between values and teacher-child congruities might vary as a function of sex, grade level, and/or ethnic group, three further analyses were performed. First, factor scores were correlated with congruities for boys and girls on both pre- and posttest. The results are shown in Table 46.

The major differences between the sexes were (a) that for girls, Me First correlated significantly with congruity while for boys it did not, and (b) although Social Conformity remained significantly related to congruity for girls in posttest, for boys it did not. It is interesting to note that even when the sexes were analyzed separately, Masculinity remained significantly related to congruity in both pre- and posttest for both sexes. The rank order of the relationships changed somewhat although Asocial and Academic retained their high rank while Social Conformity increased in importance for girls and decreased in importance for boys.

Table 46. Correlations between Factor Scores and Teacher-Child Congruities on Pre- and Posttest for Boys (N=287) and Girls (N=324)

Factor	Boys		Girls	
	Pretest	Posttest	Pretest	Posttest
	<u>r</u>	<u>r</u>	<u>r</u>	<u>r</u>
Me First	-.089	-.091	-.298**	-.125*
Masculinity	-.326**	-.155	-.288**	-.171**
Asocial	-.603**	-.246**	-.610**	-.361**
Academic	.425**	.202**	.395**	.187**
Adult Closeness	-.016	.118	.078	-.042
Sociability	.092	.021	.082	.038
Social Conformity	.344**	-.118	.366**	.283**

N=287 * r =.120; p <.05; ** r =.158; p <.01
N=324 * r =.109; p <.05; ** r =.143; p <.01

Table 47 shows the results of correlating factor scores with teacher-child congruities when the three grades are considered separately. For first grade children, the only pretest responses that bore any relationship to congruity with teacher were those measuring the Me First and Adult Closeness factors. Taking the responses of first grade children only eight months later, Me First no longer related to congruity but scores on Asocial, Masculinity, Academic, and Adult Closeness did.

For second grade children, the only pretest responses significantly relating to congruity with the teacher were Asocial, Masculinity, and Academic. By posttest all factors bore significant relationships to congruity.

For third grade children pre- and posttest responses bore consistent relationships to congruity. The highest relationship, as usual, was the negative one with Asocial. To the extent that children are like teachers in values, disapproval of asocial acts and situations plays the major role.

There are some interesting points to note in grade comparisons. First, Social Conformity did not relate significantly to congruity throughout the first grade. It became significantly related in grade two and remained so. Second, the posttest relationships between factor scores and congruities were considerably higher than were the pretest relationships when grades were compared but when sexes were compared (Table 46) the reverse was true. Third, the relationship between Masculinity and congruity increased sharply in second grade and began to lose its importance in third grade while, at the same time, Academic increased in importance from first to third grade. Fourth, the role of Me First seems to have become more important to congruity with increasing grade level, at least on posttest.

Explanation of these findings is difficult since congruities are a function of both child values and teacher values and not only do children change, but teachers of different grades may well be different. The implication, however, is that at different grade levels, different values have different weights (or degrees of importance) in determining how alike teachers and children can be expected to be in value.

For ethnic comparisons of weights of factors in determining congruities with teachers, only posttest relationships are discussed. Results are shown in Table 48.

The four ethnic groups have in common the fact that the major determiner of their congruity with teacher is based on disapproval of asocial acts or situations. They also have in common the importance of Academic value although the relationship is lowest for the Oriental, presumably because the Oriental group is less variable and higher in this value than any other. In all cases Social Conformity also contributes significantly to congruity.

The interesting aspects of the data in Table 48 relate to the differences between the groups. In the cases of both Anglos and Orientals, Me First

Table 47, Correlations between Factor Scores and Teacher-Child Congruities on Pre- and Posttest for Children in Grades 1 (N=165), 2 (N=179), and 3 (N=267)

Factor	Grade 1 ^a		Grade 2 ^b		Grade 3 ^c	
	Pretest r^*_p	Posttest r^*_p	Pretest r^{**}_p	Posttest r^{**}_p	Pretest r^{***}_p	Posttest r^{***}_p
Me First	-.177	.05	-.101	ns	-.229	.01
Masculinity	-.023	ns	-.363	.01	-.237	.01
Asocial	-.092	ns	-.383	.01	-.363	.01
Academic	.120	ns	.177	.05	.242	.01
Adult Closeness	.156	.05	.081	ns	.061	ns
Sociability	.001	ns	.137	ns	.091	ns
Social Conformity	.015	ns	.155	.05	.270	.01

a N=165 $*r=.156; p < .05$ $r=.204; p < .01$

b N=179 $**r=.148; p < .05$ $r=.194; p < .01$

c N=267 $***r=.121; p < .05$ $r=.159; p < .01$

Table 48. Relationships between Factor Scores and Teacher-Child Congruities on Posttest by Ethnic Group

	<u>Anglo</u>	<u>Negro</u>	<u>Oriental</u>	<u>Mexican-American</u>
	<u>r</u>	<u>r</u>	<u>r</u>	<u>r</u>
Me First	-.360**	-.117	-.319**	-.051
Masculinity	-.457**	-.196*	-.449**	-.384**
Asocial	-.630**	-.544**	-.533**	-.488**
Academic	.512**	.409**	.350**	.406**
Adult Closeness	.376**	.059	.070	.185
Sociability	.175**	.106	.226**	.202**
Social Conformity	.395**	.297**	.279**	.185**

*r significant $p < .05$ (N 's vary)
 **r significant $p < .01$ (N 's vary)

bears a significant negative relationship to congruity; for Negroes and Mexican-Americans it does not. Only for the Anglo is there a significant relationship between Adult Closeness and congruity. Sociability seems to be positively and significantly related to congruity in all cases except that of the Negro.

Relationships between Teacher-Child Congruities and Criteria

Ratings-Total Group

The extent to which a teacher can be expected to rate a child high on any "desirable" characteristic and low on any "undesirable" characteristic should bear some relationship to how much the child and teacher are alike with respect to values. To state this as a hypothesis: The more alike the teacher and child are in values, the more favorable will be the teacher's perception of him.

To test this hypothesis, three analyses were performed. First, intercorrelations of ratings and teacher-child congruities were computed for both pre- and posttest. The results appear in Table 49. Second, multiple regressions were computed using pre- and posttest congruities as the dependent variables and ratings as the independent variables. The results are shown in Table 50. Third, a group of children high in congruity with the teacher on posttest ($N=140$) was compared with a group low in congruity ($N=96$) with respect to all ratings by computing t ratios for the significance of the differences. Results appear in Table 51.

Table 49. Intercorrelations of Ratings and Teacher-Child
Congruities on Pre- and Posttest (N=611)

<u>Rating</u>	Pretest		Posttest	
	<u>r</u>	<u>p</u>	<u>r</u>	<u>p</u>
Sociability	.067	ns	.071	ns
Health Habits	.052	ns	.045	ns
Academic Motivation	.087	< .05	.122	< .01
Adult Closeness	.071	ns	.098	< .05
Asocial Behavior	-.058	ns	-.162	< .01
Aesthetic	.050	ns	.042	ns
Social Conformity	.086	< .05	.191	< .01
Masculinity	-.174	< .01	-.317	< .01
Me First	-.055	ns	-.108	< .01
Academic Ability	.146	< .01	.169	< .01
Classroom Behavior	.194	< .01	.242	< .01
Peer Relations	.110	< .01	.149	< .01
Satisfactoriness	.119	< .01	.190	< .01
<u>r</u> =.083; <u>p</u> <.05				
<u>r</u> =.108; <u>p</u> <.01				

Table 50. Stepwise Multiple Regression of Ratings in the Prediction of Teacher-Child Congruities
(N=611)

Pretest Rating	<u>R</u>	<u>r</u>	Postest Rating	<u>R</u>	<u>r</u>
Classroom Behavior	.194	.194**	Masculinity	.317	-.317**
Masculinity	.224	-.174**	Classroom Behavior	.346	.242**
Academic Ability	.243	.146**	Academic Ability	.361	.169**
Social Conformity	.255	.086*	Sociability	.366	.071
Sociability	.262	.067	Health Habits	.372	.045
Me First	.267	-.055	Peer Relations	.374	.149**
Academic Motivation	.270	.087*	Me First	.376	-.108**
Peer Relations	.273	.110**	Asocial Behavior	.378	-.162**
Asocial Behavior	.275	-.058	Academic Motivation	.380	.122**
			Social Conformity	.381	.191**

*r = .083; p < .05

**r = .108; p < .01

Table 51. Significant Differences in Ratings between High-Posttest-Congruity Children (N=140) and Low-Posttest-Congruity Children (N=96)

Rating	M H	M L	<u>t</u>	<u>p</u>	Direction
Sociability	2.18	2.45	-1.84	ns	
Health Habits	1.67	1.82	- .98	ns	
Academic Motivation	2.11	2.54	-2.71	.007	H>L
Adult Closeness	2.78	3.14	-2.06	.040	H>L
Asocial Behavior	4.06	3.38	4.06	.000	L>H
Aesthetics	2.28	2.34	- .39	ns	
Social Conformity	1.63	2.27	-4.81	.000	H>L
Masculinity	3.61	2.35	6.92	.000	L>H
Me First	3.73	3.11	3.37	.001	L>H
Academic Ability	2.51	3.03	-3.47	.001	H>L
Classroom Behavior	4.10	3.07	6.54	.000	H>L
Peer Relations	1.79	2.38	-4.27	.000	H>L
Satisfactoriness	1.50	2.13	-4.70	.000	H>L

Significant intercorrelations of congruities and ratings in Table 49 lead to the following conclusions:

1. Sharing of values in both pre- and posttest was positively related to ratings of Academic Motivation, Social Conformity, Academic Ability, good Classroom Behavior, good Peer Relations, and general Satisfactoriness.
2. Sharing of values in both pre- and posttest was negatively related to rating of Masculinity.
3. Sharing of values in posttest was positively related to the rating of Adult Closeness and negatively related to ratings of both Asocial Behavior and Me First.
4. Correlations increased, in general, in posttest.
5. Sociability, Health, and Aesthetic ratings were unrelated to teacher-child congruities in either pre- or posttest.

The results of stepwise multiple regression analyses are provided in Table 50. Stepwise R 's for ratings are given to the cutoff point of an increase no greater than .001. The corresponding r 's for each rating are provided for interpretation of the direction of the prediction.

For both pre- and posttest, Classroom Behavior, Masculinity, and Academic Ability were the ratings most heavily weighted in the regression equations. Similar ratings appeared in both equations with the exception of Health Habits which, while it did not correlate significantly with posttest congruities and did not appear in the pretest R , nevertheless was relatively important in the posttest prediction. In neither case was the R impressive in size but it is possible to say that in the case of some ratings the hypothesis was supported and in all cases the relationships were in the expected direction (i. e., children rated "good" were more like the teacher in values; children rated "bad" were less like her). Missing from both equations are: Aesthetics, Adult Closeness, and Satisfactoriness.

In the comparisons between high-congruity children and low-congruity children with respect to ratings, presented in Table 51, 10 out of 13 ratings were found to differentiate at better than the .05 level of confidence and nine t ratios were significant well beyond the .01 level. All differentiations were in the expected direction with the posttest high-congruity children rating higher (lower mean except in the case of Classroom Behavior) on favorable characteristics and lower on unfavorable. The mean pretest congruity for the high posttest congruity children was .429; for the low posttest congruity children the pretest congruity mean was .052. Ratings of Sociability, Health Habits, and Aesthetic did not relate to teacher-child congruency (i. e., differentiate between high- and low-congruent children). However, high-congruity children were significantly more satisfactory as students.

Reading Scores - Total Group

On both pre- and posttest, those children most congruous with their teacher had the higher reading scores as evidenced by the pretest correlation of .261 ($p < .01$) and the posttest correlation of .295 ($p < .01$). To the extent that these relationships exist, it can be said that the more like the teacher the child is in values the better he will do in school if reading is the criterion of achievement. It should be remembered that although Masculinity contributes significantly to congruity, it is not correlated with achievement.

Ratings - By Sex

When posttest teacher-child congruities were correlated with ratings in separate analyses for boys and girls, none of the ratings correlated with congruity for boys. For girls the significant relationships were in the following order of magnitude: (1) Academic Ability, .205; (2) Classroom Behavior, .201; (3) Satisfactoriness, .188; (4) Social Conformity, .162; (5) Peer Relations, .151; (6) Masculinity, -.143; (7) Me First, -.115; (8) Academic Motivation, .112; and (9) Adult Closeness, .111 were a correlation of .109 is significant at the .05 level and one of .143 is significant at the .01 level.

Reading Scores - By Sex

Correlations between reading scores and teacher-child congruities were significant for both boys and girls on posttest. For boys the correlation was .246 ($p < .01$) and for girls it was .179 ($p < .01$).

Ratings - By Grade

When grades were analyzed separately, the following significant relationships between teacher-child congruities and ratings were found on posttest:

1. The more like his teacher a first grade child was in values the lower that child was rated in Masculinity, Asocial Behavior, and Me First characteristics and the higher he was rated in Classroom Behavior.
2. The more like the teacher a second grade child was, the higher that child was rated in Sociability, Health Habits, Academic Motivation, Adult Closeness, Aesthetics, Social Conformity, Academic Ability, Classroom Behavior, Peer Relations, and Satisfactoriness. The less the second grade child was like the teacher, the higher that child was rated in Asocial Behavior and Masculinity. The only nonsignificant relationship was between the Me First rating and congruity.

3. The more like the teacher a third grade child was in values, the higher the child was rated in Social Conformity, Classroom Behavior, Peer Relations, and Satisfactoriness and the lower was that child's rating in Masculinity.

Reading Scores - By Grade

Correlations between teacher-child congruities at posttest and reading scores were: (a) nonsignificant for the 132 first grade children; (b) .275 ($p < .01$) for 133 second grade children; and (c) .260 ($p < .01$) for 200 third grade children.

Ratings - by Ethnic Group

When posttest congruities were correlated with ratings for each ethnic group taken individually, the results were:

1. The more the Anglo child was like his teacher in values, the higher he was rated in Classroom Behavior and Satisfactoriness and the lower he was rated in Masculinity.
2. For Negro children, being like the teacher in values was not related to any rating.
3. The more like the teacher the Oriental child was, the lower he was rated in Masculinity and the higher he was rated in Peer Relations.
4. The more like the teacher the Mexican-American child was in values the higher he was rated in Academic Motivation, Adult Closeness, Social Conformity, Academic Ability, Classroom Behavior, Peer Relationships, and Satisfactoriness. The less like her he was, the higher he was rated in Asocial Behavior and Masculinity.

Reading Scores - by Ethnic Group

For Anglos and Orientals the relationships between posttest congruence and reading scores were nonsignificant. For Mexican-Americans, the correlation was .170, significant at the .05 level, indicating that for this group, the child who was most like his teacher in values at posttest had a tendency to read better.

Relationships between Teacher-Child Congruity Changes and Criteria.

Ratings

In order to examine the possibility that the child's becoming more like the teacher might be related to the teacher's perception of him, congruity changes were correlated with ratings. The results are shown in Table 52.

Table 52. Correlations between Teacher-Child Congruity Changes and Teachers' Ratings (N=611)

<u>Rating</u>	<u>r</u>	<u>p</u>
Sociability	.044	ns
Health Habits	.022	ns
Academic Motivation	.090	<.05
Adult Closeness	.072	ns
Asocial Behavior	-.153	<.01
Aesthetic	.020	ns
Social Conformity	.170	<.01
Masculinity	-.265	<.01
Me First	-.093	<.05
Academic Ability	.111	<.01
Classroom Behavior	.168	<.01
Peer Relations	.109	<.01
Satisfactoriness	.107	<.01

Examination of Table 52 reveals that the highest relationship found was between congruity change and rating of Masculinity. Since boys were rated masculine and girls, feminine, this is consistent with the finding that boys became less like their teachers in values while girls became more like them.

It can also be seen that the more like the teacher a student became over eight months, the higher that student was rated in Classroom Behavior, Social Conformity, Satisfactoriness, Peer Relations, Academic Ability, and Academic Motivation. The more unlike her he became, the higher he was rated in Asocial Behavior and Me First.

It seems evident that just as original congruity of values was associated with more favorable ratings, so increasing congruity was associated with higher ratings on desirable characteristics. There are several possible explanations for both findings. First, the child with socialized values probably behaves in such a manner as to merit favorable ratings. His ratings may be realistic reflections of his behavior. Second, the child who is perceived as meriting high ratings may become more like his teacher as a function of his need to meet her expectations. Third, regardless of original congruity, the teacher imparts her values to some children more than others and to the extent that she perceives the child as adopting her values, she may rate him higher in desirable characteristics. Fourth, the teacher and child may become more compatible in values either because he changes in her direction or she changes in his (or both), and this increasing compatibility may produce a "halo" effect in which she rates him favorably on a number of characteristics because she has a generally favorable attitude toward him. Any combination of these interactive effects may occur. There is no way to partial them out.

Reading Scores - Total Group

The correlation between value congruity change and reading scores was .166, significant beyond the .01 level. Since the correlation was positive, the relationship is one of greater achievement with increasing congruity.

Ratings - By Sex

Just as there were no significant relationships between posttest congruity of values of boys and ratings, so there were no significant relationships between congruity changes in boys and any of the ratings. For girls there were several. In summary:

1. The more like a teacher a girl became over the course of eight months, the lower she was rated in Asocial Behavior, Masculinity and Me First.
2. The more like a teacher a girl became, the higher she was rated in Social Conformity, Academic Ability, Classroom Behavior, and Satisfactoriness.

Reading Scores - By Sex

Where correlations between congruity change and reading were computed by sex, relationships were significant for both boys and girls. The correlation for boys was .176 ($p < .01$) and for girls, .129 ($p < .05$), indicating that achievement bears some relationship to increasing conformity between the values of children and those of their teacher.

Ratings - By Grade

Results of correlating congruity changes (increasing congruity of values) with ratings by grade were as follows:

1. The more like the teacher the first grade child became, the lower he was rated in both Asocial Behavior and Masculinity. The explanation for the second finding is obvious since girls became more congruous with teachers than boys did. (It will be recalled that boys became less so).
2. For second grade children almost all relationships were significant and in the expected directions. The only two ratings that did not correlate with increasing congruities were Sociability and Me First.
3. By third grade, increasing congruity was associated significantly only with ratings of Masculinity, Aesthetics, and Social Conformity. The first two associations were negative; the last was positive.

Reading Scores - By Grade

When reading scores were correlated with increasing congruity by grade, the results were as follows: (a) change in first grade was not related to achievement; (b) change in second grade correlated .279 ($p < .01$ for an N of 133) with achievement; (c) change in third grade correlated .167 ($p < .05$ for an N of 200) with achievement.

Ratings - By Ethnic Group

The results of correlating teacher-child congruity changes and ratings by ethnic group were as follows:

1. The more like the teacher in values the Anglo became, the higher he was rated in Social Conformity, Classroom Behavior, and Satisfactoriness and the lower he was rated in Masculinity.
2. For Negro children, changes in congruity were not related to any ratings.
3. The Oriental child who became more like his teacher was rated higher in Peer Relations and lower in Masculinity.
4. The more like his teacher the Mexican-American child became, the higher his rating in Academic Motivation, Adult Closeness, Social Conformity, Classroom Behavior, and Satisfactoriness and the lower he was rated in Asocial Behavior and Masculinity.

Reading Scores - By Ethnic Group

For Anglos and Orientals, correlations between reading scores and congruity changes were nonsignificant. For Mexican-Americans, increasing congruity correlated .172 with reading, a relationship significant at the .05 level.

Teacher-Class Congruity Differences

To test hypotheses related to the relative congruities of teacher-with-own-class and teacher-with-other-classes, it was necessary to correlate every one of each teacher's responses with the responses of every child in the sample of 611 retest children. There were 28 teachers. The next step was to obtain t ratios for teacher-own-class vs teacher-each-other class.

The hypothesis to be tested was: A teacher will be more congruous with her own class than she will with any other class. The results of the analysis provided 784 t ratios and 784 p levels of significance in a 28 by 28 matrix. This matrix is too large for reproduction in this

report nor is its examination necessary since it will be evident to the reader from Table 53 that the hypothesis was totally rejected.

Table 53 shows (a) the school within which the class was tested, (b) the class's assigned number, (c) the grade level, (d) the number of children in the class, (e) the mean pretest and posttest congruities of each teacher with her own class, (f) the number of times (by t ratios significant beyond the .05 level) a teacher was more like her own class than she was like any other, (g) the net number of closer relationships a teacher had to her class than to others (i.e., the difference between her significantly higher relationships to her class and significantly higher relationships with other classes) for both pre- and posttest, and (h) net change (i.e., difference between pre- and posttest net relationships). Those teachers who were like their own class more often than they were like other classes obtain net "+" indices on pre- and posttest while those who were less like their own class than like others obtain net "-" indices. Net change indicates that a teacher increased (+) or decreased (-) in her relative congruity with her class. These changes were not tested for significance.

To aid in interpreting these differential relationships, it is necessary to convey some information about the schools. School 1 is composed mostly of Mexican-American children who live in a barrio. Schools 2 and 3 are in a middle- to upper-middle class neighborhood and the predominant ethnic groups are Anglo and Oriental. Schools 4 and 5 are in a middle- to lower-middle class community and have an ethnic composition that is primarily Negro with a sizeable representation of Mexican-Americans and some Anglos.

It is interesting to note that in School 1 there is only one teacher (Teacher 5) who at pretest is, on more occasions, significantly more like her class than she is like others and by posttest there is no teacher in this school who is more often like her class than like others although Teacher 6 has improved markedly in this respect.

When it comes to schools 2 and 3, where one would expect the highest teacher-class congruities because of the composition of the classes (highly achieving and very conforming children), there are only two teachers who on pretest are relatively less like their classes than like others (Teachers 10 and 11) and on posttest Teacher 10 has a higher net congruity with her class than with others while Teacher 11 remains the same. However, Teachers 15, 16, and 17 have become less like their classes than like others by posttest time.

In schools 4 and 5 results vary although there is a pretest predominance of zero or negative net congruities, Teachers 26 and 28 being the exceptions. By posttest, Teacher 22 has gained in congruity with her class and is now more like it than like others. One other interesting point is that the only teacher to have a negative relationship with the class is Teacher 27, the only male teacher whose values were assessed. By posttest he has a zero relationship to his class.

Table 53. Mean Teacher-Class Congruities and Number of Comparisons in Which Teachers are Significantly More or Less Like their Own Class than Like Other Classes in Pre- and Posttest

Schl.	Teacher	Grade	N	M _Z Pre-test	No. Times Own > Other	No. Times Own < Other	Net Pre	M _Z Post-test	No. Times Own > Other	No. Times Own < Other	Net Post	Net Change
1	1	1	17	.171	0	3	-3	.305	0	1	-1	+2
1	2	2	20	.248	0	0	0	.192	0	4	-4	-4
1	3	3	20	.102	1	6	-4	.168	0	4	-4	+1
1	4	3	17	.256	3	3	0	.296	1	2	-1	-1
1	5	3	15	.248	8	1	+7	.229	0	3	-3	-10
1	6	1	15	.094	0	16	-16	.277	0	4	-4	+12
1	7	2	18	.231	2	2	0	.134	0	10	-10	+12
2	8	2	22	.287	2	0	+2	.362	3	0	+3	-10
2	9	3	25	.256	5	0	+5	.388	16	0	+16	+1
2	10	1	28	.155	0	5	-5	.249	3	1	+2	+11
2	11	2	20	.229	0	4	-4	.318	0	4	-4	+7
2	12	3	26	.306	4	0	+4	.403	8	0	+8	0
2	13	1	22	.315	4	4	0	.322	1	2	-1	+4
2	14	3	25	.440	6	0	+6	.488	18	0	+18	-1
3	15	1	28	.273	3	2	+1	.272	0	5	-5	+12
3	16	2	24	.272	6	1	+5	.355	8	1	+7	-6
3	17	3	24	.308	4	0	+4	.122	0	4	-4	+2
3	18	1	22	.161	4	1	+3	.203	5	0	+5	-8
3	19	2	29	.271	8	1	+7	.307	9	2	+7	+2
3	20	3	24	.433	19	0	+19	.412	16	0	+16	0
3	21	3	24	.290	5	0	+5	.287	3	0	+3	-3
4	22	1	16	.179	0	0	0	.246	13	0	+13	-2
4	23	2	24	.004	1	6	-5	.311	1	2	-1	+13
4	24	3	26	.191	1	4	-3	.031	0	2	-6	+4
5	25	2	22	.204	0	6	-6	.242	0	6	-6	-3
5	26	3	19	.367	9	0	+9	.395	8	0	+8	0
5	27	1	17	-.024	0	12	-12	.000	0	6	-6	-1
5	28	3	22	.165	10	2	+8	.186	5	3	+2	+6
												-6

It is very important to remember in interpreting the findings with respect to teacher-class congruities that when changes occur from pre- to posttest, the change is in the class, not the teacher. As has been noted before, the teacher only provided responses to the VIC once and those responses were obtained at the time of posttest. Therefore, when a teacher and her (his) class become more congruous, it is because the class is changing in the direction of the teacher, not the reverse.

It is also important to remember that when congruities are compared, results are as much a function of the values of the class as of the teacher.

What conclusions can be drawn from these comparisons? First, it is obvious that some teachers are more like their classes (or classes like their teachers) in values than are others. Second, most become more congruous (when means are compared) over a period of eight months but some become less so. If teachers are mature in values and children become more socialized, congruity would be expected to increase. This is evidently not true of some classes of children. On the other hand, if teachers are not mature and children become more socialized, congruity should decrease. Although one cannot state equivocally that decreasing congruity of values works to the detriment of the child, the correlation between increasing congruity and the criterion of achievement (reading scores) was positive and significant ($r=.17$; $p < .01$). At least to that extent it would seem desirable that children acquire values similar to those of their teacher, particularly those values that are predictive of achievement.

It would be interesting to study teacher-class interactions in those cases in which over the period of a year children appear to be moving in the direction of "unsocialization" of values. These cases are not so much peculiar to schools as they are to grade levels. One fourth (2/8) of the first-graders, one eighth of the second-graders (1/8), and two-thirds (8/12) of the third-graders seem to change in this manner. The only instances of "no change" occur in second grade with three classes exhibiting zero net changes. However, when statistical tests were applied, no significant differences appeared in congruity changes and these differences may well be either artifacts of the method by which they were developed, (i.e., a simple tally of number of net changes) or the amount of change in one direction may cancel out the effect of changes in the other.

Reliabilities of Dimensions

Although the original VIC no longer exists, reliabilities of the seven short dimensions were calculated as a matter of interest. Table 54 provides the Alpha coefficients and the Spearman-Brown correction for a test of double length.

Table 54. Reliabilities of Dimensions of Original VIC (N=1079)

<u>Factor</u>	<u>Alpha</u>	<u>S-B Reliability</u>
Masculinity	.66	.80
Academic	.64	.78
Asocial	.69	.82
Sociability	.45	.62
Adult Closeness	.64	.78
Social Conformity	.57	.73
Me First	.44	.61

Considering that some of these dimensions had only two items (Adult Closeness and Sociability) and that at the most only seven (Masculinity), these reliabilities are fairly good. The final utility of the VIC rests, however, on its expanded form for which reliabilities are provided in Chapter VII.

CHAPTER SIX

RESULTS OF ANALYSES OF FOURTH AND FIFTH GRADE CHILDREN FROM SPRING TEST

All of the children tested in the Spring ($N=1079$) were pooled and a factor analysis of their responses to the 30 retained items performed. As expected, the seven-factor solution was most clearcut and is presented in Table 55.

Results were much the same as those obtained using only grades one through three (see Table 16) except that the Social Conformity factor has lost Smoke/not to Asocial as well as part of the variance in Listen-talk and Duty/play, and the Me First factor has lost some variance to Asocial. The inclusion of older children, as has been stated, tends to shift some conformity items toward the Asocial dimension and, as will be seen in Chapter VII, this phenomenon occurs to some extent in the revised version.

The last analysis done with the Spring test group was a comparison of grades 4 and 5 with each of the other grades. So that the reader will not have to glance back at the comparisons between the first three grades, all five are included in Table 56.

There is a decrease in Me First value up to grade 3 and beyond that point there seems to be no significant change since 3 does not differ from either 4 or 5 nor do 4 and 5 differ. Children in grade 5 score higher in Masculinity than do children in any other grade but the only other difference appears to be a higher score on this dimension for grade 3 than grade 1.

There is a decrease in Academic value that seems to endure through the fourth grade at which point the value seems to stabilize. Asocial also decreases with all older children scoring lower than grade 1, grade 2 scoring higher than either 3 or 5, and grade 5 scoring lower than 4.

In Adult Closeness, first grade children are higher than either fourth or fifth. Sociability increases up to grade 3 where it seems to stabilize. Social Conformity does not show change until grade 5 where, interestingly, the older children seem to be less conforming than the younger (with the exception of first-graders).

From these results it can be seen that there are, indeed, changes in values with age and it is to be suspected that if successively higher grades were tested there might be reversals. On the other hand, it may be that values do become stable around age nine or ten as suggested in the data. Of particular importance is the increasingly negative attitude of children toward school which while it may not relate to achievement, is worthy of further investigation since it may in the long run be related to attendance.

Table 55. Seven-Factor Orthogonal Solution for Spring
Test: 30 Items with Factor Loadings Above
.30 (N=1079)

I.	<u>Me First</u>		II.	<u>Masculinity</u>	
	Push/swing	.59		Snake	.53
	1st/3rd	-.56		Ghosts	.52
	Student/teacher	.55		Cave	.51
	Watch/play	.54		Boxing	.42
	Eat/share	-.52		Tug-of-war	.42
	Small/large	.45		Knife	.40
				Soldier	.37
III.	<u>Academic</u>		IV.	<u>Asocial</u>	
	Studying	.66		Littering	.66
	Classroom	.65		Stealing	.54
	Teacher	.52		Fence	.50
	Reading	.32		Water man	.49
				Smoke/not	-.34
				Listen/talk	.34
				Duty/play	.30
				Eat/share	-.30
V.	<u>Adult Closeness</u>		VI.	<u>Social Conformity</u>	
	Pat/hug-Father	.71		Duty/play	-.53
	Hug/pat-Mother	-.62		Listen/talk	-.45
				Bed/up	-.39
				Sleep/talk	-.37
VII.	<u>Sociability</u>				
	Talk 1/+	.70			
	Play 1/+	.39			

Table 56. Factor Score Comparisons between Grade Levels
for Spring Test Sample (Grade 1: $N=165$
Grade 2: $N=179$; Grade 3: $N=267$; Grade 4: $N=240$;
Grade 5: $N=228$)

I. Me First					
	1	2	3	4	5
1	—	.037	.000	.000	.000
2	1>2	—	.009	.005	.000
3	1>3	2>3	—	ns	ns
4	1>4	2>4		—	ns
5	1>5	2>5			—

II. Masculinity					
	1	2	3	4	5
1	—	ns	.035	ns	.000
2		—	ns	ns	.025
3	3>1		—	ns	.040
4				—	.013
5	5>1	5>2	5>3	5>4	—

III. Academic					
	1	2	3	4	5
1	—	ns	.024	.000	.000
2		—	.023	.000	.000
3	1>3	2>3	—	.003	.001
4	1>4	2>4	3>4	—	ns
5	1>5	2>5	3>5		—

IV. Asocial					
	1	2	3	4	5
1	—	.004	.000	.000	.000
2	1>2	—	.011	ns	.001
3	1>3	2>3	—	ns	ns
4	1>4			—	.001
5	1>5	2>5		4>5	—

V. Adult Closeness					
	1	2	3	4	5
1	—	ns	ns	.030	.005
2		—	ns	ns	ns
3			—	ns	ns
4	1>4			—	ns
5	1>5				—

VI. Sociability					
	1	2	3	4	5
1	—	ns	.008	.040	.002
2		—	.000	.019	.001
3	3>1	3>2	—	ns	ns
4	4>1	4>2		—	ns
5	5>1	5>2			—

VII. Social Conformity					
	1	2	3	4	5
1	—	ns	ns	ns	ns
2		—	ns	ns	.005
3			—	ns	.001
4				—	.006
5		2>5	3>5	4>5	—

CHAPTER SEVEN
RESULTS OF ANALYSES OF THE REVISED VALUES
INVENTORY FOR CHILDREN

Factor Analyses

Since the revised version of the VIC was presumed to contain seven factors, a principle axes factor analysis of the item responses of Fall Test children, rotating seven factors to the varimax criterion, was performed. To determine the possible effect of adding or subtracting a factor, six- and eight-factor solutions were also performed. Eigenvalues leveled off at seven factors after which the proportion of variance added was less than .01. With seven factors, 31% of the common factor variance was accounted for. In the six-factor solution, Adult Closeness disappeared and the two items measuring it loaded negatively on Masculinity but below .30. In the eight-factor solution, there was no loading above .30 on the eighth factor. Clearly, the revised version contained seven factors. Factor loadings for each item on every factor and item communalities are presented in Table 57.

Although the final structure is not perfect, it is certainly more than satisfactory. The Asocial factor retains all of its items and acquires a small (.34) loading for Duty/play, an item which better measures Social Conformity. The Me First factor remains pure and of the nine items loading on it, none has a loading lower than .51. Academic also remains pure. Sociability is clearcut with the exception of the one item (Dance +/-) which also has a slight loading (-.33) on Social Conformity. All Masculinity items load greater than .30 on their appropriate factor and none loads as high as .30 on any other. Adult Closeness retains its original two items and all other items have extremely low loadings on it. Social Conformity loses three items designed to measure it in the sense that they fail to reach the criterion of loading .30 or higher. These items are Smoke/not, Toss/roll, and Leave/pickup. Smoke/not loads -.27 on Asocial and on no other factor. Leave/pickup also loads -.28 on Asocial and on no other factor. Toss/roll (throwing the ball in the air in the house as opposed to rolling it on the ground) loads -.23 on Asocial and -.23 on Me First.

To determine the extent to which factors might overlap, despite the orthogonality of the solution, factor scores were intercorrelated. The results are shown in Table 58.

Of the 21 correlations, four were significant beyond the .01 level and two were significant beyond the .05 level. Although all correlations were low, Asocial seems to be negatively related to Academic and Social Conformity and positively related to Masculinity. Social Conformity bears a slight negative relationship to Masculinity and a slight positive one to Adult Closeness. Adult Closeness has an additional negative relationship to Masculinity.

Table 57. Seven-Factor Orthogonal Solution of Revised VIC Based on Children in Grades 1 through 4
(N=1167)

	Factor							h^2
	I	II	III	IV	V	VI	VII	
	<u>Asocial</u>	<u>Me First</u>	<u>Sociability</u>	<u>Academic</u>	<u>Social</u> <u>Conformity</u>	<u>Masculinity</u>	<u>Adult</u> <u>Closeness</u>	
3 Water Man	<u>.42</u>	.03	-.08	-.20	-.16	.22	-.02	.30
5 Jumping	<u>.48</u>	.15	.01	-.28	-.14	.21	.00	.39
7 Dump	<u>.48</u>	.08	-.08	-.27	-.12	.24	-.01	.38
10 Halloween	<u>.54</u>	.13	-.03	-.16	-.14	.11	-.01	.37
13 Cake	<u>.42</u>	.15	-.05	-.19	-.07	.09	.02	.25
14 Stealing	<u>.62</u>	.07	-.08	-.06	-.06	.13	-.02	.42
16 Littering	<u>.64</u>	.07	-.05	-.07	-.11	.07	-.03	.44
19 Pool	<u>.59</u>	.15	-.09	-.14	-.11	.11	.04	.42
22 Fence	<u>.54</u>	.12	.00	-.13	-.20	.25	-.07	.43
36 Duty/play	<u>.34</u>	.15	-.04	-.16	-.48	.10	-.13	.42
27 Eat/share	-.12	-.51	.15	.06	.06	-.09	.07	.32
30 Cone 2/1	-.12	-.53	.10	.09	.14	-.09	.04	.34
31 Small/large	.06	.54	-.08	-.05	-.12	.04	-.02	.32
34 Push/ride	.09	.70	-.08	-.08	.10	-.03	-.08	.53
38 Push/swing	.12	.68	-.11	-.04	-.07	.07	-.03	.50
39 Watch/play	.03	.55	-.11	-.07	-.08	.14	.03	.34

Table 57 (cont.)

	Factor							h^2
	I Asocial	II Me First	III Socia- bility	IV Academic	V Social Conformity	VI Mascu- linity	VII Adult Closeness	
40 1st/3rd	-.10	-.61	.05	.01	.00	-.07	-.04	.39
41 Student/teacher	.05	.60	-.04	-.06	-.11	.04	.07	.39
44 Take/no	-.19	-.55	.11	.09	.03	-.03	-.02	.37
25 Picnic 1/+	-.06	-.10	.51	.05	.06	-.09	.06	.29
29 Talk 1/+	-.04	-.06	.61	.02	-.07	-.02	.05	.39
32 Castle +/1	.06	.18	-.56	-.04	-.06	.11	-.04	.37
37 Dance +/1	.00	.07	-.47	.03	-.33	.00	-.04	.34
42 Walk 2/1	.08	.10	-.59	-.07	-.06	.05	-.02	.38
46 Play 1/+	-.11	-.19	.47	.09	-.01	-.03	-.01	.28
2 Studying	.01	-.08	.02	.47	.01	-.12	-.01	.24
4 Globe	-.09	-.03	.03	.41	.10	-.01	-.01	.19
8 Class read	-.13	-.07	.08	.53	.12	-.07	-.03	.33
11 Classroom	-.20	-.11	.05	.57	.01	-.04	-.03	.39
15 Teacher	-.16	-.04	.01	.57	-.02	.01	.01	.35
18 Writing	-.06	-.04	.06	.44	.08	-.02	.06	.21
20 School	-.08	-.02	.05	.37	.05	-.06	.01	.15
24 Reading	-.22	-.03	-.03	.48	.02	.09	.03	.28

Table 57 (cont.)

	Factor							
	I	II	III	IV	V	VI	VII	h^2
	<u>Asocial</u>	<u>Me First</u>	<u>Social- bility</u>	<u>Academic</u>	<u>Social Conformity</u>	<u>Masculinity</u>	<u>Adult Closeness</u>	
26 Movie/hand	.25	.12	-.15	-.07	-.45	.22	-.02	.35
43 Bed/up	.25	.12	-.01	-.06	-.34	.02	.00	.20
47 Wash/play	.29	.17	-.02	-.14	-.63	.11	-.08	.55
50 Sleep/talk	.14	.23	.01	-.10	-.32	.21	.05	.23
35 Listen/talk	.21	.14	-.13	-.13	-.56	.09	-.07	.43
1 Tug-of-war	.04	.13	-.01	.02	.04	.33	-.04	.13
6 Cave	.12	.01	-.05	-.02	-.17	.41	.02	.22
9 Ghosts	.12	.06	-.04	-.10	-.08	.36	-.01	.17
12 Boxing	.05	.10	-.08	-.03	-.03	.42	-.01	.20
17 Soldier	.10	.05	-.04	-.07	-.08	.46	-.08	.25
21 Knife	.21	.11	-.03	-.03	-.02	.42	-.07	.24
23 Snake	.21	.00	-.06	.01	-.20	.33	-.07	.20
33 Pat/hug-Father	-.03	.04	.11	-.01	.07	-.10	.55	.33
48 Hug/pat-Mother	.02	.03	-.04	-.04	-.03	.12	-.71	.53
28 Smoke/not	-.27	-.07	.02	.04	.20	-.07	.02	.12
45 Toss/roll	-.23	-.23	.00	.06	.14	-.18	-.03	.16
49 Leave/pickup	-.28	-.07	.09	.07	.07	-.02	.01	.10

Loadings greater than .30 are underlined.

Table 58. Intercorrelations of Factor Scores ($N=1167$)

	Asocial	Me First	Social	Acad.	Soc. Con.	Masc.	Ad. Cl.
Asocial		.033	-.011	-.133**	-.123**	.142**	.013
Me First			-.059	-.025	-.044	.053	.017
Sociability				.021	.027	-.037	.040
Academic					.034	-.011	-.003
Social Conformity						-.077*	.070*
Masculinity							-.086**
Adult Closeness							

$r=.062; p < .05$
 $r=.081; p < .01$

Scores

Since this was to be the final version of the test, it was considered desirable to develop a scoring system by evaluating equivocal items. Thus, X items were given weights of 1, 2, 3, and 4 depending on the face response and keyed in the direction prescribed (i.e., the more the item was "liked," the higher the score for Asocial, Academic, and Masculinity). Y items were given weights of 2 or 3, depending on the picture chosen, and keyed in the direction appropriate to the factor (e.g., the "sociable" responses of choosing many friends received a weight of 3 while the "unsociable" responses of preferring only one friend received a weight of 2). Each child then received a combined weighted score for each dimension. The three items "lost" in the factor analysis were not used in the initial scoring system. All non-factor items were then correlated with these scales. Results are shown in Table 59.

When items were correlated with all scales (including the ones of which they were a part), the first finding was that Smoke/not, Toss/roll, and Leave/pickup did not correlate as high as .30 with any scale. These items were not added to the scores.

Me First remains "pure" in the sense that no non-Me First items correlate as high as .30 with it. The same holds true of Adult Closeness and Sociability despite the fact that one Sociability item (Picnic 1/+) correlates -.33 with the Asocial scale.

It is easy to see why Asocial and Social Conformity are related to some extent since three Social Conformity items correlate at least .30 with Asocial and all Asocial items correlate greater than .30 with the Social Conformity scale. In future applications of the VIC it might be well to combine these scales into a general value socialization scale, thus providing greater reliability for a dimension of that nature. This was not done in this study partly because of limitations of time, and

Table 59. Correlations .30 or Greater between Items and Dimension Scores

<u>Factor</u>	<u>Item</u>	<u>r</u>	<u>Factor</u>	<u>Item</u>	<u>r</u>
Asocial	Water man*	.57	Me first	Eat/share*	-.59
	Jumping*	.68		Cone 2/1*	-.58
	Dump*	.64		Small/large	.58
	Halloween*	.68		Push/ride*	.69
	Stealing*	.64		Push/swing*	.68
	Littering*	.63		Watch/play*	.60
	Pool*	.68		1st/3rd*	-.64
	Fence*	.67		Student/teacher*	.64
	Classroom	-.34		Take/no*	-.60
	Picnic 1/+	-.33	Academic	Studying*	.58
	Listen/talk	+.32		Globe*	.51
	Duty/play	+.31		Class read*	.59
	Wash/play	.36		Classroom*	.64
Sociability	Picnic 1/+*	.60		Teacher*	.66
	Talk 1/+*	.61		Writing*	.55
	Castle +/1*	.63		School*	.52
	Dance 1/+*	.53		Reading*	.59
	Walk 2/1*	.66		Jumping	-.34
	Play 1/+*	.61		Dump	-.31
Masculinity	Tug-of-war*	.49	Social Conformity	Movie/hand*	-.58
	Cave*	.54		Listen/talk*	-.58
	Ghosts*	.54		Duty/play*	-.58
	Boxing*	.58		Bed/up*	-.55
	Soldier*	.60		Wash/play*	-.67
	Knife*	.56		Sleep/talk*	-.60
	Snake*	.46		Water man	-.32
	Jumping	.30		Jumping	-.37
	Dump	.30		Dump	-.35
	Fence	.34		Halloween	-.34
Adult Closeness	Pat/hug-Father*	.80		Stealing	-.31
	Hug/pat-Mother*	-.83		Littering	-.34
				Pool	-.35
				Fence	-.40

* Items are part of score and so are part-whole correlations

partly because Social Conformity operated differently in group differentiation than did Asocial.

The relationships between Asocial and both Academic and Masculinity are primarily attributable to the correlation between two items (Jumping and Dump) and those two scales. In addition, Fence, an Asocial item also correlates with Masculinity. Jumping and Dump did not have factor loadings as high as .30 on either Academic or Masculinity so despite their splitting somewhat onto these factors, and because of their high correlations with their own scale, they have been retained.

In order to determine the relationships that the derived dimension scores had to the factor scores for the same dimensions, correlations were computed. The results appear in Table 60, below.

Table 60. Correlations between Factor Scores and Derived Scores

<u>Dimension</u>	<u>r</u>
Asocial	.92
Me First	.95
Sociability	.93
Academic	.95
Social Conformity	.77
Masculinity	.93
Adult Closeness	.88

With the exception of Social Conformity, a factor which had substantial loadings of Asocial items and which lost three items and split several, most contrived scores seem quite substantially related to the original factor scores and it is suggested that anyone wishing to apply the VIC in further research employ this scoring system.

Item response distributions by ethnic group and for the total Fall sample of 1167 children were recorded and appear in Appendix G. Derived score distributions by sex, grade, and ethnic group were recorded and the percent response at each score level as well as the cumulative percentages are presented in Appendix H. A number of the distributions are markedly skewed and since, as has often been remarked, it is not possible to generalize beyond these data, the reader is left to derive his or her own norms based on whatever population is used in any future experimental work. However, the authors did develop C-scale norms for the total sample and these are presented following the results of group comparisons based on factor scores.

With respect to the derived scores, it should be pointed out that theoretically the minimum score, based on those giving no answer to any item on a scale, is zero. Maximum scores vary with the number of items

Table 61. Breakdown of Fall Test Sample (N=1167)

Grade	Anglo		Negro		Mexican-American		Total Grade
	Boys	Girls	Boys	Girls	Boys	Girls	
1	54	60	32	22	58	51	277
2	62	46	32	28	63	55	286
3	72	55	34	39	53	55	308
4	64	69	41	26	48	48	296
Boys Total	252		139		222		613
Girls Total		230		115		209	554
Ethnic Total	482		254		431		1167

Total Boys

Total Girls

Total Sample

in the scale and the weights assigned to them. Thus, X items, if answered, have maximum weights of 4 while Y items have maximum weights of 3. If all are answered by every examinee, the ranges of scores are as follows:

1. Asocial (9 items), range of 9 to 36.
2. Me First (9 items), range of 18 to 27.
3. Sociability (6 items), range of 12 to 18
4. Academic (8 items), range of 8 to 32.
5. Social Conformity (6 items), range of 12 to 18.
6. Masculinity (7 items), range of 7 to 28.
7. Adult Closeness (2 items), range of 4 to 6.

Group Comparisons

The breakdown of the Fall sample is presented in Table 61. Group comparisons were based on factor scores rather than derived scores since these were available and derived scores were not until immediately before the report deadline. Since the correlations between the two sets of scores are in general, high, it is assumed that the results would have been essentially the same had derived scores been used. Table 62 shows the comparison between boys and girls with respect to the seven dimensions.

Table 62. Factor Score Comparisons between Sexes Using Revised VIC (Boys: $N=613$; Girls: $N=554$)

<u>Factor</u>	MG	MB	<u>t</u>	<u>p</u>	Direction
Asocial	.031	-.031	1.23	ns	
Me First	-.111	.125	-4.47	.000	B > G
Sociability	.130	-.116	5.01	.000	G > B
Academic	.048	-.054	2.07	.039	G > B
Social Conformity	.070	-.081	3.20	.001	G > B
Masculinity	-.245	.272	-12.31	.000	B > G
Adult Closeness	.149	-.163	6.98	.000	G > B

The results of the sex comparison using the revised VIC are completely consistent with those from the original form except that in the revised form, Me First becomes differentiating with boys scoring higher than girls. Once again, Asocial does not differentiate, supporting the general research findings of others that girls are no more "moral" than boys.

Grade comparisons based on revised dimensions are shown in Table 63. With respect to Asocial there is the same decrease in Asocial value as seen with the original VIC and the Spring test sample. This decrease continues to be significant until third grade but the difference between third and fourth is nonsignificant in this analysis, as it was in the Spring analysis, and in that analysis third grade did not differ from either fourth or fifth. This value evidently stabilizes at third grade.

The Me First dimension is one on which first grade children score highest using both the revised and original VIC. With the Fall sample the decrease seems to stabilize in the second grade. With the Spring sample it stabilized in the third with third grade children being significantly lower than second but no different from fourth or fifth grade children.

Sociability increased up to the third grade using the revised VIC and the Fall sample. Third and fourth were not differentiated. The same results were found using the original VIC in the Spring.

The revised VIC and Fall sample provided slightly different results with respect to Academic value. In the Fall, the second grade was significantly higher than either first or fourth in this value. In the Spring there was a decreasing liking for school-related activities up through the fourth grade.

Social Conformity as measured by the revised VIC produces results that are not in conflict with those of the original since differences between grades 1, 2, 3, and 4 are nonsignificant in both cases. However, in the Spring sample, where results were available for fifth grade, the older children scored lower than did those in grades two and three. Whether this dropping off of conformity is a general phenomenon is impossible to determine from these data.

The results of the Fall test of Masculinity, a factor retained in its original form, show no significant changes with age. In the Spring sample, grade five was significantly higher than grades 1, 2, or 3 and grade 3 was higher than grade 1. Once again, it is difficult to say whether or not these are conflicting results since the Fall test sample did not contain any fifth grade children.

Adult Closeness results are quite different for the Fall sample than for the Spring. This factor also remained the same, containing only two items. In the Spring sample, grade 1 was higher than either 4 or 5 and it should be expected that children would become less intimate with parents as they mature. However, in the Fall sample, third grade children were higher in this value than either first or fourth and second grade children were higher than first. This suggests increasing fondness for intimacy up to grade three and a decrease at grade 4.

It is evident that changes in some values do occur with age and there are suggestions that they may either stabilize or reverse themselves at different age levels. Further exploration of older children is necessary.

Table 63. Factor Score Comparisons Between Grade Levels Using Revised VIC
(Grade 1: $\bar{N}=277$; Grade 2: $\bar{N}=286$; Grade 3: $\bar{N}=308$; Grade 4: $\bar{N}=296$)

I Asocial					II Me First					III Sociability				
1	2	3	4		1	2	3	4		1	2	3	4	
-	.000	.000	.000		-	.001	.034	.000		-	ns	.000	.000	
1>2	-	.048	.001		1>2	-	ns	ns		3>1	-	.018	.001	
1>3	2>3	-	ns		1>3	-	-	ns		4>1	3>2	-	ns	
1>4	2>4	-	-		1>4	-	-	-			4>2	-	-	

1	2	3	4
1	2	3	4
2	3	4	
3	4		
4			

IV Academic					V Social Conformity					VI Masculinity				
1	2	3	4		1	2	3	4		1	2	3	4	
-	.008	ns	ns		-	ns	ns	ns		1	ns	ns	ns	
2>1	-	ns	.000			-	ns	ns		2	-	ns	ns	
		-	ns				-	ns		3		-	ns	
2>4		-	-					-		4		-	-	

1	2	3	4
1	2	3	4
2	3	4	
3	4		
4			

| VII Adult Closeness | | | | | | | | | | | | | |

1	2	3	4
-	.044	.015	ns
2>1	-	ns	ns
3>1	-	-	.019
~~3>2~~	~~3>4~~	~~3>4~~	-

1	2	3	4
1	2	3	4
2	3	4	
3	4		
4			

Table 64. Factor Score Comparisons Between Ethnic Groups Using Revised VIC
(Anglo: $\bar{N}=482$; Negro: $\bar{N}=254$; Mexican-American: $\bar{N}=431$)

I Asocial			II Me First			III Sociability		
A	N	M	A	N	M	A	N	M
A	-	.000	A	-	.001	A	-	ns
N	N > A	-	N	N > A	-	N	-	ns
M	M > A	-	M	N > M	-	M	-	-

IV Academic			V Social Conformity			VI Masculinity		
A	N	M	A	N	M	A	N	M
A	-	.006	A	-	ns	A	-	.020
N	N > A	-	N	-	ns	N	~~N > M~~	.044
M	M > A	-	M	-	-	M	A > M	W > M

VII Adult Closeness		
A	N	M
A	-	ns
N	-	ns
M	-	-

Since the Fall test sample included only three ethnic groups and these groups were all in integrated schools, it is not really appropriate to compare them with the Spring group. Results of the comparisons between them are shown in Table 64.

For Sociability, Social Conformity, and Adult Closeness there are no significant differences between groups. The two outstanding characteristics of Anglos are their relatively low Asocial and Academic values. These characteristics were also evident in the Spring test. The outstanding characteristic of the Mexican-American in this sample is his lower score in Masculinity in which he is exceeded by both Negroes and Anglos. The Negro is characterized by high Me First values in which he exceeded both Anglos and Mexican-Americans.

Graphic Representation of Factor Scores for the Revised VIC by sex, grade, and ethnic group appears in Appendix I.

Reliabilities of Dimensions

Alpha coefficients were computed for scale scores and the Spearman-Brown formula applied to each. The results are shown in Table 65, below.

Table 65. Reliabilities of Revised VIC Scales

<u>Scale</u>	<u>Alpha</u>	<u>S-B Reliability</u>
Asocial	.82	.90
Me First	.85	.92
Sociability	.74	.85
Academic	.72	.84
Social Conformity	.74	.85
Masculinity	.61	.76
Adult Closeness	.59	.74

While moderate, these reliabilities are within acceptable limits for usefulness.

Norms

With the exception of Adult Closeness for which the range of scores is too small, C-scale norms were derived for the dimensions of the VIC and are given in Table 66.

Table 66. C-Scale Norms for Total Fall Test Sample (N=1167)

<u>C Scores</u>	<u>Asoc.</u>	<u>Soc.</u>	<u>Me First</u>	<u>Acad.</u>	<u>Soc. Conf.</u>	<u>Mascu.</u>
10	33+	18	27	32	18	25+
9	29-32	18	26	31	18	23-24
8	24-28	18	25	30	18	21-22
7	19-23	18	23-24	29	18	18-20
6	15-18	17	21-22	27-28	17	16-17
5	12-14	16	20	24-26	17	11-15
4	10-11	15	19	21-23	16	9-10
3	9	14	18	17-20	15	8
2	8	12-13	17	14-16	14	7
1	7	11	16	12-13	12-13	6
0	6 below	10 below	15 below	11 below	11 below	5 below

CHAPTER EIGHT

DISCUSSION

Definition of Values

Since the beginning of the two years of effort that have gone into the development of the Values Inventory for Children, the authors have been criticized for failing to fall into line with, or to establish, a theoretical position concerning the meaning of the term "value." During these two years many definitions, theories, and measures of value have been reviewed and since our own position has been so frequently questioned, it would seem that something needs to be said in the way of an apologia (but not apology) for our point of view.

The Confusing State of Affairs

It is generally conceded that even at this late date in the consideration of "values" as a topic of study, there is little agreement with respect to the definition of the elusive term. Part of the problem arises from the fact that whatever values are, they are of major concern to such varied disciplines as anthropology, sociology, psychology, education, and philosophy. Goldschmidt and Edgerton (1961), speaking from the point of view of anthropologists, said that:

Though most of us now accept values as something amenable to study, we have not reached any agreement as to what that something is, nor arrived at any very clear means for its objective analysis. The subject has been much written about; in its pure and hyphenated forms it has been dissected, delineated, differentiated, and combined. We are all acquainted with the differentiation between the desired and the desirable, the existential and the ideal, reality-choice and construct, the is versus the ought (p. 26).

In his review of psychological studies of values, Dukes (1955) said:

...such terms as attitude, interest, motive, need, sentiment, or valence are often used interchangeably with value... and investigations of level of aspiration, character, or the superego almost necessarily involve evaluations... The traditional 'aggregate' approach (values equal 'motivation' plus 'learning') has... been seriously questioned... (p. 25).

Hogan and Dickstein (1971) stated that:

...even a cursory survey of how psychologists have used the term values leaves one with a feeling of dismay (cf.: Allport, 1961, p. 296; Berkowitz, 1964, p. 444; Flugel, 1945, p. 12; Lewin, 1951, p. 273; McClelland, 1951, p. 243; Murray, 1938, p. 106; Pittel & Mendelsohn, 1966, p. 22; Schiebe, 1970, p. 1) (p. 1).

To add to the confusion, Scriven (1966) said that the term "value" in

its broadest sense includes standards of any kind referring to any field (preferential values) which must be distinguished from moral (normative) values and these must be distinguished from personal standards of behavior and thought (prudential and conventional values). One must also, according to him, distinguish between the widest spread of the term "value" which includes every item-preference and the sense in which it refers to more abstract criteria (honesty, etc.) and one must, further, distinguish objective values from (a) falsely professed values, (b) truly professed values, (c) truly professed and actually operative values, and (d) implicit values (those which their owners reject but which motivate them). Finally, one must distinguish values in the sense of internal sets or attitudes, and values as individual properties from values as group properties.

The last comment on the state of confusion comes from Mowrer (1967) who said that the word value is:

...an essentially useless term, which has recently come into vogue because it serves as a sort of lowest common denominator for all who recognize, however vaguely, the reality of some sort of axiological dimension in human existence, but who don't want to be pinned down to anything too specific...the term, unless extensively qualified, verges on meaninglessness and certainly lacks power and precision. (p. vii)

Selected Attempts at Definition

There are definitions of both "values" and "value-orientations" and while this review does not pretend to be exhaustive, it does attempt to be representative.

Rokeach (1968b) differentiates between instrumental and terminal values in the following way:

An instrumental value is therefore defined as a single belief which always takes the following form: 'I believe that such-and-such a mode of conduct (e.g., honesty; courage) is personally and socially preferable in all situations with respect to all objects.' A terminal value takes a comparable form: 'I believe that such-and-such an end-state of existence (e.g., salvation; a world at peace) is personally and socially worth striving for'. (p. 16).

Woodruff (1952) defines a value as an object, condition, or activity which the individual feels has an effect on his well-being. Values, according to him, have two principal roles: an end which is sought above other ends and a path that is preferred over another path. The distinction seems to be the same as that expressed by Rokeach in his discussion of terminal and instrumental values.

Barthol and Bridge (1968) define values (both instrumental and terminal) as entities, events, or behaviors that are wanted or preferred (or, negatively, unwanted or rejected) whether as ends in themselves or as means to other values. In a simple motivational model, they state, good

things to do might be called instrumental and good things to happen, terminal.

Goldschmidt and Edgerton (1961) use a definition derived from Goldschmidt (1959):

Values, then, may be defined primarily as those individual personal qualities which are considered to be desirable by people in a given culture... But values are more than vague, abstract attributes; they are also patterns of behavior which are the manifestations of these values... Furthermore, the concept of values includes also the public and external expression of these attributes... In every culture there are material things, titles, required expressions of deference, and the like, which are public and concrete manifestations of value attributes. (1961, pp. 72-73).

English and English (1958) define a value as "an abstract concept... that defines for an individual or for a social unit what ends or means to an end are desirable" (p. 576).

Brameld (1957) defines values as constructs with cognitive and cathectic aspects which can be potentially verbalized and which are both organizers of behavior and equated with what is desirable. From his point of view, values are seen as attachable to goals, forming criteria for selection from among suitable alternatives.

Ryan (1971) defines values as "...objects, states, or behaviors with cognitive or affective aspects, equated with what is important or desirable, attachable to goals and expressible as desired ends or means to an end." (p. 14).

Williams (1951) called values meaningful and affectively charged modes of organizing behavior, establishing the criteria which influence choices and goals.

Spindler (1955) thought of values as either general or specific constructs, considered as norms for behavior, internalized by people, and directly involved with controlling the mechanics of personalities.

In all the literature relating to occupational choice or to job satisfaction (too copious to be cited here), values are equated with interests and attitudes. For example, Rosenberg (1957) considered values as that in which people are interested and Glaser and Maller (1940) discussed values from the standpoint of interests. McClung (1963), in a review of the literature relating interest, attitudes, values, and personality traits to occupation (see Guilford, 1967), could find little distinction between the terms. Examples of the types of "values" considered by those studying job satisfaction are: (a) security; (b) congenial coworkers; (c) monetary rewards; (d) comfortable working conditions. Workers are sometimes asked how important each of these is to them; their response is considered to be a value judgment. At other times they are asked how they feel about, like, or how much they are interested in these same aspects of the job.

Maxson (1958) defines values as being constituted by feeling associations (cathexes) with specific persons, things, or ideas. He constructed a Value Orientation Scale emphasizing a "pleasantness-unpleasantness" dimension of value.

Despite the very gray area between attitudes and values, Smith (1966) does not believe that values and attitudes are equivalent. He conceives of values as being ratings while attitudes are expressions of feelings. Ratings are in terms of such indicators as "good," "bad," "right," "wrong," "desirable," or "undesirable." Expressions of feeling or attitude are in terms of such indicators as "like," "dislike," "enjoy," "don't enjoy," "approve of," or "disapprove of." For pedagogical purposes, he says, the value of an object is its rating by competent persons, not the affective state of the respondent toward the object.

Krathwohl, Bloom, and Masia (1956), in their taxonomy of affective educational objectives, include attitudinal matters in their "valuing" category while their "organizational" category conceptualizes values in such a way as to involve ratings.

Nowell-Smith (1954) said that values precede and give rise to attitudes, the function of which is to express one's verdicts or appraisals of something or somebody. Appraisals are judgments, not just expressions of one's taste or preference. Values, to him, are the criteria which are assumed or implied when one makes a judgment.

Exemplifying those who regard values as a matter of morality, Scott (1965) said: "A person may be said to entertain a value to the extent that he conceives a particular state of affairs as an ultimate end, an absolute good under all circumstances, and a universal 'ought' toward which all people should strive" (p. 15). Gorsuch (1971) adopts this definition in his work.

Hogan and Dickstein (1971) first state that "Values were defined (in their study) as the standards used in moral evaluations and the criteria for choosing rules of conduct" (p. iv) and then go on to say that moral values are: (a) the standards used in making moral evaluations; and (b) the criteria used in assigning priorities to rules of conduct. "These values are not expressed directly in evaluations, nor can they be defined in terms of the moral rules...they are implicit in the process of judgment which precedes moral evaluations or conflict resolution, and they must be inferred from the ensuing behavior" (p. 4). These authors think that the values themselves can be evaluated and proceed to judge them on the basis of "maturity." Other authors would agree (e.g., Kohlberg, 1964; Piaget, 1948; Bandura, 1969; Bandura & McDonald, 1963; Bandura and Walters, 1963; Aronfreed, 1968).

Some authors (primarily anthropologists and sociologists) prefer to talk about "value orientations" but even here there is disagreement. C. Kluckhohn (1951) is generally conceded to have made the most systematic and comprehensive approach to the definition problem (Goldschmidt & Edgerton, 1961). He considers value-orientations as complex, rank-ordered principles resulting from the interplay of three distinguishable elements of the evaluative process: the cognitive, the affective, and the directive which give order and direction to human acts and thoughts as these relate to the solution of human problems.

In their Harvard Southwest Values Studies, F. Kluckhohn and Strodtbeck (1961) identify five value orientations: (1) Human Nature, involving perception of man as good, evil, neutral, or a mixture of good and evil, and either mutable or immutable in whichever category he falls; (2) Man-Nature, in which one perceives man as either in subjugation to, in harmony with, or in mastery over nature; (3) Time Sense, in which one is oriented to the past, present, or future; (4) Activity, focussing on either being (spontaneity), becoming (development), or doing; (5) Relational, consisting of a subcategory involving lineal relations (dominance of group goals through time by positional succession as seen in kinship and heredity) and a subcategory involving collateral relations in which the primacy of goals and the welfare of the laterally extended group are immediately related in time and space.

Schwartz (1969), in her study of value orientations of Mexican-American and Anglo children, says:

'Value orientations' refers to the emotional as opposed to the rational outlook of a pupil. Other terms used in the same general context are: affectivity orientations, attitudes, beliefs, dispositions, feelings, and personality characteristics. Each involves the sentiment or the affective processes more than the cognitive processes (p. 55).

Muncy (1967) defines value orientation as the particular way an individual reacts to certain elements of culture, such as artifacts, behavior, and ideas, classifying these elements into good and bad, desirable and undesirable, right and wrong categories.

Precker (1952) defines "valuings" as a system of probable behavior occurring under stated conditions involving an overt or covert approach-indifference-withdrawal dimension.

So much for this review of definitions as provided in the abstract. Definitions based on measurement are provided below. In the meantime, if the reader is interested in pursuing the topic further, he has the choice of anthropological treatments (e.g., Firth, 1953; Bidney, 1953; Belshaw, 1959); social philosophy treatments (e.g., Lepley, 1956; Morris, 1956); sociological treatments (e.g., Scott, 1959; Adler, 1956), or psychological treatments (e.g., Dukes, 1955; Maslow, 1959).

Measures of Values

It was once facetiously suggested by the senior author of this report that "Personality is what personality tests measure." Although this may seem circular, it is a fact of life that once a behavioral scientist develops an instrument or scale and gives it a name, he comes to believe that it represents reality in terms of an inherent or learned personal characteristic and that all of human nature can be classified on the continuum he has identified. The writer is as guilty of this reification of measurement as is any other psychologist. The major battle between most factor analysts consists in a sort of "My factor is better than your factor because..." debate that goes on and on so long as the dimensions derived are not the

same. When they are, each believes his measure to be superior to that of the other. Somewhere in this chaos there must be order. To see whether such order exists in the domain of values, we will take a brief look at some representative samples.

First, the reader should be aware that there are two primary ways of going about developing measures of value (or any other internalized human process the content of which is unknown). Basically, one is inductive and the other deductive. The inductive process involves gathering as many samplings of "expression" of values as possible and categorizing these according to some logical scheme. The deductive process involves generating dimensions from a theoretical model and developing measures which, in the "expert" judgment of the developer will (hopefully) represent these dimensions. These approaches can, of course, be combined.

For a brief history of the measurement of values, Dukes (1955) dates the first attempt to psychometrically structure values back to 1780 when Bentham (1948) outlined the rudiments of a "hedonic calculus." In American history Thurstone (1927) and Vernon and Allport (1931) are almost tied for first place. Their approaches were quite different, however. Thurstone applied the method of psychophysics to preferences; Vernon and Allport adopted Spranger's (1928) theory of types of men, a theory which has never been demonstrated empirically. From these divergent beginnings, Thurstone (1952) produced a measurement of values as did Allport and Vernon (1931). The latter, in both its original and more recent (Allport, Vernon, & Lindzey, 1951) forms, has undergone such extensive application (see Duffy, 1940 and Dukes, 1955, for example) that for years it was almost defensible in psychology to say that "Values are what the Allport-Vernon measures." It is well-known that the dimensions measured by the A-V-L are: (1) theoretical; (2) economic; (3) political; (4) aesthetic; (5) religious; and (6) social.

The Allport-Vernon Study of Values is by no means the only instrument claiming to measure or describe values. Before 1955 others had been created by Cohen (1941); Friedman (1946); Glaser and Maller (1940); Harding, (1944); Jacobs, (1939); Lurie (1937); Thorndike (1937; 1938); Van Dusen, Wimberly, & Mosier (1939); White (1951); Wickert (1940); and Woodruff (1942).

Before looking at some more recent attempts to measure values, it is appropriate to describe the inductive method (Approach 1) and the deductive (Approach 2). Approach 1 has been traced back to Osborn (1894) who asked small children what they should do to be called "good" or "bad." Kalthorn (1944) used this approach in obtaining the values of rural children and differentiating between Mennonites and non-Mennonites. He also suggested that the terms "like" and "dislike" could be substituted for "good" and "bad." The method was formalized by Bavelas (1942) who receives credit for it from Havighurst and Neugarten (1955) as well as from those responsible for the ECHO system (Barthol & Bridge, 1968; Barthol & de Mille, 1969).

Gorsuch (1971) applied this method to obtain the values of the children he studied and Ryan (1971) also used the inductive method al-

though she supplemented interviews with reviews of the literature and expert opinion.

The method has much to recommend it, but a number of drawbacks. Its strong point is that it assumes nothing and permits those to be evaluated to generate the criteria for their evaluation. This is also a weakness in that it has been found, first, that many people are not capable of verbalizing "good" things and "bad" things (to do or to happen) or qualities of people they "admire" and, second, when they do generate concepts, they do so in a biased fashion. To elaborate on the second problem, one's responses to these inquiries will vary from day to day, depending on what is uppermost in their mind at the time. Furthermore, if a "good" or "bad" thing is so good or bad that it "goes without saying," so to speak, it may never occur to them to mention it. An additional problem, found by Havighurst and Neugarten (1955), was that some topics are taboo in some cultures. Thus, death was never mentioned as a "bad thing to happen" by the Navajo since he is forbidden to discuss it. In line with this, it is possible that some subjects are so culturally taboo, even in our current society, that they might never be verbalized. They might never even come into consciousness. If they do, they may be listed as "good" by some people and "bad" by others. It was the experience of two members of the staff (Goldberg & Guilford, 1972), in the development of a measure of values for delinquents (Appendix J), that some teenagers and preteens listed such things as "smoking grass," and "making out" under "good" things while others placed the same items under "bad" things.

A second problem with this method is that it can generate so many divergent items as to make the task of categorization a prodigious one despite the fact that this is the computer age. In her reviews and interviews, Ryan (1971) found 7,121 items which reduced to 51 dimensions. Obviously it is impossible to measure so many entities. Nevertheless, as de Mille (1972) says, Kalhorn (1944), Havighurst and Neugarten (1955), and Barthol and de Mille (1969) reported impressive agreement between judges sorting statements under concept names. Agreement ranged up to 95 percent. Our only comment: pity the poor sorters!

Another problem encountered by those working on the ECHO system was that of defining values and disvalues. Their experience showed that not every value had a concomitant disvalue attached to it and vice versa (de Mille, 1970). That is, there was no opposite "bad" thing for some "good" things.

The final problem this author sees in this approach is a semantic one and attaches to the meaning of the words "good" and "bad" and "admire" or "do not admire." Personal experience in the application of the ECHO system, as well as a review of the work of its founders, has demonstrated that people interpret these words in different ways. The first interpretation is usually the "moral" one and responses have to do with morally good or bad behavior. The second is one which implies a hedonic tone, i.e., pleasure. Thus, teenagers have listed both "obey parents" and "go waterskiing" under "good things to do." In the first case they are interpreting "good" as "ought." In the second, they are interpreting it as "like." And herein lies part of the problem in defining

values. Are they things we know are "right" or are they things we "like"? If we do not like to do what is right, do we really possess the value we express when asked? The problem will be discussed further a little later.

The second problem in the application of this technique involves the way the question is phrased. If one asks what is a "good" thing to do, we have, as just pointed out, the problem of the dual interpretation (i.e., ambiguity) of the word "good," but one derives things that are morally good and things that are pleasant in response. However, if one asks respondents to think of someone they "admire" and then to tell what it is they admire about that person, responses are most likely to be in terms of personal qualities-- not what one does but what one is. So, it can be seen that the manner in which values are defined is in part a function of the manner in which the question is asked or, conversely, the manner in which the question is asked may well be derived from the investigator's definition of "values."

Let us now look at some of the results of attempts to measure values. In 1966, Pittel and Mendelsohn reviewed tests and instruments designed to measure moral values. The earliest-constructed of these devices dated back to 1912. To examine their review, the reader is referred to their article. It is sufficient here to say that they criticized these tests on the following bases: (1) some assess knowledge of legal, moral, or ethical standards rather than the individual's attitude toward them and possession of information is correlated with intelligence and with increasing age; (2) scoring for some instruments is based on moral standard "correctness" as established by investigators; (3) judgments are often required with respect to ethical concepts or abstractions (e.g., "stealing") rather than with respect to behavior occurring in realistic situations; the subject is asked to do in a test situation what he would never do in real life; (4) orientation instructions, item content, or test situations may elicit socially desirable responses which limits variability in response. The criticisms made by these authors are precisely the criticisms that the writers of this report would make.

The manner in which problems in measurement of values manifest themselves is seen in Gorsuch's (1971) study. Gorsuch obtained eight useable dimensions of value from children in grades four, five, & six but found, in application, that they merged into one dimension which he labeled "Value Socialization."

Kohlberg (1964) also developed a moral judgment scale which when applied, has been successful in diagnosing the stages of moral development by age, sex, and ethnicity. Hogan and Dickstein (1971) report on the development of a measure of moral maturity consisting of five dimensions hypothesized by Hogan (1967): (1) moral knowledge; (2) socialization; (3) empathy; (4) autonomy; and (5) moral reasoning (scaled from moral intuitionism to moral rationalism). Although these dimensions seemed related to ratings of moral maturity, there is no evidence that they are independent and the authors admit that moral knowledge is related to IQ. Their items look very much like attitude measures (e.g., "The FBI has its hands tied in many cases because of the unreasonable opposition of

some people to wire tapping.") to which the subject is expected to react in an open-ended fashion. The purposes of most of these devices have been primarily either to identify the moral development of children or to compare cultures or subcultures.

The writers have no quarrel with the inclusion of a dimension of morality within the domain of values. Indeed, the VIC contains two such dimensions: Asocial and Social Conformity. Neither was derived, however, by implications of "right" or "wrong" but, rather, by asking children how they "liked" specific behaviors each of which had moral implications. More important, there is far more--in our opinion--to values than "right" and "wrong" and, further, whether or not a child, or any individual, can make a moral judgment reveals little or nothing about his moral values. Moral judgment is a cognitive process, requiring experience with respect to the concept in question. Moral reasoning, like any other kind of reasoning, requires intelligence. Thus, any intelligent adult knows what society smiles and frowns upon and can easily express very socialized values while in his daily life behaving in an amoral or immoral way. The secret to measuring his true moral values is to provide him with stimuli having no implications of "right" or "wrong" but calling only for his affective response to objects, persons, concepts, situations, etc. The major problem is to avoid a social desirability response set.

In experience with small children in item tryouts we found that they are quick to reject things that are obviously "wrong" and to choose things that are "better" in the moral sense if these things obviously have moral implications. They are much less likely to make judgments if they are exposed to stimuli that are just a "little wrong" or are not the "best" thing but are enjoyable. Thus, the "wrong" thing that is "fun" arouses positive affect and "having fun" has a high valence for children (adults, too). If the pleasant, but not so socially desirable, activity is preferred to the less pleasant but socially desirable activity, then we would say that the child "values" pleasure more than he "values" doing what he "ought" to do.

It seems impossible that anyone could deny that "pleasure" is a value and that for those who are oriented toward their own personal enjoyment, it often conflicts with and "wins out" over other values. One can thus "value" one's life and health and still indulge in pleasurable habits that are detrimental to both (e.g., smoking, overeating, drinking alcohol). In such a case, one values the pleasure of the moment more than he values the long-range goal. Those who wish to relate values to behavior are wasting their time if they ask such a person whether or not his health is important or good health is desirable because, of course, he will almost always say "Yes." Those concerned with moral development seem to assume that once one knows what is "right" one will "like to do" what is right (or, at least, do it). Perhaps the distinction is between the cognitive and the affective and our quarrel with equating moral values with values-in-general is based on our belief that motivation (what one likes, enjoys, wants to do) is far more important in human behavior than cognition (knowledge of what one ought to do).

At this point, it might be useful to review some other measures or formulations of values. Gordon (1969), using Q analysis, developed measures of personal and interpersonal values. Included in his personal values were: (1) practical-mindedness; (2) achievement; (3) variety; (4) decisiveness; (5) orderliness; and (6) goal orientation. Included in his interpersonal values were: (1) support; (2) conformity; (3) recognition; (4) independence; (5) benevolence; and (6) leadership.

Scott (1965) derived twelve dimensions of value. They were: (1) intellectualism; (2) kindness; (3) social skills; (4) loyalty; (5) academic achievement; (6) physical development; (7) status; (8) honesty; (9) religiousness; (10) self-control; (11) creativity (originality); and (12) independence.

Gorsuch (1971) categorized value statements of children in grades four, five, and six into: (1) academic achievement; (2) affiliation; (3) diligence; (4) good manners; (5) honesty; (6) kindness; (7) obedience; (8) physical appearance and development. As previously stated, these better fit into an overall framework of Value Socialization.

When disvalue statements of college students were factor analyzed (de Mille & Hirschberg, 1972), the results were as follows: (1) Be Untrustworthy; (2) Have Trouble in School; (3) Neglect or Injure One's Health; (4) Mistreat Parents or Intimates; (5) Exploit People; (6) Drop Out of School.

Kohn (1969), using factor analysis, derived the following dimensions of value: (1) authoritarianism-conservatism; (2) anxiety; (3) self-confidence; (4) idea-conformity; (5) attribution of responsibility; (6) criteria of morality; (7) self-depreciation; (8) generalized disenchantment; (9) compulsiveness; (10) trustfulness; and (11) stance toward change.

Bales and Couch (1969) also used factor analysis of statements made in group discussions and obtained four factors: (1) acceptance of authority; (2) need-determined expression versus value-determined restraint; (3) equalitarianism; and (4) individualism.

Gorlow and Noll (1967) factor analyzed value statements of college students and found the following value-type factors: (1) affiliative-romantic; (2) status-security valuers; (3) intellectual humanists; (4) family valuers; (5) rugged individualists; (6) undemanding-passive; (7) boy scout; and (8) Don Juan.

Greenberger, Campbell, Sorensen, and O'Connor (1971) factor analyzed 55 value items differentiating between fifth and eleventh grade children and obtained five factors: (1) self-esteem; (2) openness to change; (3) independence; (4) identity; (5) social tolerance.

Rokeach (1968) identifies the following terminal values: (1) freedom; (2) equality; (3) salvation; (4) a comfortable life; (5) a meaningful life; (6) a world at peace; (7) maturity; (8) national security; (9) respect for others; (10) respect from others; (11) true friendship; (12) wisdom.

Fletcher (1966) identifies the following social values: (1) private effort; (2) personal goals; (3) social causation; (4) heterogeneity in human

association; (5) secularism; (6) self-determinism; (7) conservative versus liberal; (8) religiosity; (9) group goals versus private goals.

Maslow (1954) defines, on the basis of his theory, the values of the self-actualizing person as: (1) truth; (2) goodness; (3) beauty; (4) wholeness; (5) dichotomy; (6) transcendence (between inner and outer or self and world); (7) aliveness; (8) uniqueness; (9) perfection; (10) necessity; (11) simplicity; (12) richness; (13) effortlessness; (14) completion; (15) justice; (16) order; (17) playfulness; (18) self-sufficiency.

It is useless to critique all these dimensions of "value" but suffice it to say that in many cases they overlap with dimensions of "need" "attitude" and "personality" as found by other investigators. This is not to say that "value" is synonymous with these other terms but only that when it comes to attempting to segregate them it is a very difficult problem.

With respect to the difference between the terms "value," "attitude," "personality trait," or "interest," the Sociability dimension of the VIC provides a realistic vehicle for demonstrating the extent to which these terms are related to one another. One "values" friends in the sense that it is important to him to have a lot of them. His "attitude" toward having friends is positive. He is "interested" in meeting people and getting to know them. If administered a temperament or personality test measuring the "trait" of sociability, he will score high. He will also have a high "need" for affiliation. The commonality is positive affect. Cognitive evaluation of the concept of "friends" derives from that affect. The differences are more semantic than real and are based on the methods used to measure the affective state of the individual.

It is also true that if one examines the many instruments designed to measure values, one will find a great commonality in the types of questions asked. Taking any given item out of the context of a questionnaire-type instrument, one would be hard-pressed to categorize it. Interest tests generally formulate items into activities (and, in the case of the Strong, types of people) and require the respondent to tell whether he "likes" or "dislikes" the activity or whether he "prefers" one to another. When he expresses liking, he is really expressing a positive "attitude"; when he expresses preference, he is making a value judgment in the sense that one activity is "better" so far as he is concerned. He is also stating that in his "opinion" the activity is either pleasant or more pleasant than another. These expressions are personal reactions to matters of personal taste. When it comes to measuring attitudes, questions are often phrased in such a manner as to require a value judgment. For example, "All murderers should be executed" could well be a part of a scale measuring attitudes toward capital punishment, law and order, authoritarianism, aggression, or sadism, (as examples). The respondent who endorses such a statement values life less than the one who does not; he may value some form of justice more.

What one measures, then, depends on what question one asks. If

one asks if something is "right" or "wrong" one gets a value judgment expressed as an opinion. Responses to such questions are based on cognition. However, in such a case, the domain is cognitive and not affective (although affect may be attached to the cognition). The same is true if one asks the respondent to agree or disagree with a matter of fact. Either he knows or he doesn't know the "correct" answer. The problem is one of finding the question to ask to obtain an answer that falls into the category of measurement one wishes to explore. To date no one has come up with a question for the domain of values that satisfies everyone. We have suggested that asking for "good" things to do is a poor way to go about obtaining values since the word "good" is ambiguous. Also, the use of "to do" as part of the question results in responses centered on activities. If one considers values in terms of behavior, this is defensible but it contrains the domain. On the other hand, if one asks what kind of people are "admired" and what it is about them that is admired, responses will be in terms of personal qualities (what one is rather than what one does) as well as the more specific behaviors that show that the person has these qualities.

In addition to the problems of measurement, there are other problems in defining values. First, there are obvious differences between ends and means to which terminal and instrumental values apply. Ends are goals, objectives, etc., and can be thought of in terms of states of being--either personal or social. Unfortunately, they are also abstractions. Means of obtaining goals are much more concrete and can include activities (or inactivity) within the control of the individual or occurrences not within the individual's control. However, there are many ways to attain goals and both goals and means of attaining them can be moral, amoral, or immoral. As an example, having a lot of money cannot be said to be an immoral goal (terminal value). Means of achieving it can be moral (work hard), amoral (inherit it), or immoral (steal it). Society assigns these designations to instrumental activities but it is by no means true that every individual places the same value on them.

That this is true can be seen in the changing value placed by Americans on work. From the Puritan ethic of our forefathers we are becoming more leisure-oriented and thus the value placed on work has decreased while the value placed on free time to do what one pleases has increased from its original status of "sin" through a stage in which it was regarded as a "reward" for work, to the point where it has become a desirable end in itself. Still, within the American culture there are many who still cling to a "work ethic" and at the other end of the continuum, many who rebel against this ethic--the "hippie" culture. This is one more reason why values cannot be equated with morality, and why it is not possible to define values in terms of "expert opinion" as some have tried to do.

The fact that there are many goals and many ways of achieving them and that ends are abstract while means are concrete has definite implications for measurement. This is particularly true when one is attempting to assess the values of children whose experience with such esoteric concepts as "a world at peace" or "salvation" is limited to such

concrete cognitions as "Daddy will be home again if we have a world at peace" or "Going to Heaven means the end of all your troubles." It is impossible for small children to make judgments about abstract concepts but when presented with concrete objects, persons, or situations they very definitely know what they "like" and what they don't like. If values are to be considered as "ultimate goals" or "absolute goods" or "universal oughts," then small children have no values. The only way in which they develop values is by means of reward and punishment whereby they learn to react to the objects, persons, and situations in their experience on an affective continuum to which they attach cognitions such as "If I do this, I will be punished" and since the thing in question has had a label attached to it that says it is "wrong" they thereby make the correct association to their affective state.

Reformulation of the Definition

We have seen that others use such words as "interest," "attitude," "motive," "need," "sentiment," "belief," "rating," "evaluation," "opinion," "concept," "idea," "code," "principle," "standard," "norm," "criterion," "personality characteristic," ad infinitum in conjunction with the term "value." We have also seen that it is generally believed that values involve ends and means, and that ends are abstract while means are concrete (to some extent). Further, there is debate as to whether values are established by expert opinion (i.e., competent judges) or are strictly personal matters. Also, values have been identified as things to do (activities), things to happen (situations), things to be (personal qualities). They have been called "desirable," "worthwhile," "good," etc., in terms of both (or either) personal well-being and/or social wellbeing. Finally, they have been attached to objects, goals, persons, situations, states-of-being, statuses, conditions, activities, events, behaviors, etc. Strangely enough, it has seldom been stated (although it is implied by many) that what is valued must not only be perceived as desirable, but also as important. Gorsuch (1971) points out that both the Evaluative and Potency dimensions of the Semantic differential are relevant to values. However, in his analyses the two dimensions collapsed. Importance is probably the most significant aspect of values insofar as behavior is concerned because it is the criterion by which the individual determines how much he will sacrifice in terms of other goals to attain the one he desires. Thus, reverting to our smoker who "values" his health and given the fact that he knows he is undermining it, the importance he places on health as opposed to the importance he places on the pleasure he gets from smoking will determine what he does about his habit.

Despite the fact that all values have fluctuating importance due to both circumstances and day-to-day affective states, it is helpful to think of them as arrayed in a hierarchical fashion. In this sense they are, indeed, ratings or rankings. However, when it comes to the measurement of values, statistical manipulation of ipsative measures presents many problems. Furthermore, limitations on test time make it impossible for the measurer to include more than a very few concepts in his device. Consider the task of generating pair comparisons for 51 dimensions of

value as found by Ryan (1971) or even eight, particularly if the subjects are small children.

The reader will by now have guessed that the definition of values used in the construction of the Values Inventory for Children was derived on the basis of somewhat pragmatic considerations. It was, however, based in theory and the theory is as follows. Man has needs and these needs fit into a hierarchy much like that proposed by Maslow (1954). At the lowest level, he needs to survive, personally. This means that he must eat, sleep, be sheltered, and so forth. He must also be safe from danger. As these needs are satisfied, according to Maslow, he also develops (or recognizes) needs for love, self-esteem, independence, understanding, beauty in his surroundings, and, finally, self-actualization (a state in which all other needs are satisfied or are assured of satisfaction as they arise).

It is the opinion of the writer that values are simply cognitive formulations of principles based upon human needs. Thus, since man needs to survive, he values human life. First he values his own, but as he becomes a social animal, he realizes he must value the lives of others if his own is to be sustained. Since he needs to be safe, he avoids unnecessary risks. Thus, he values safety. Since he needs to be loved and learns through socialization that he will not be loved if he does not love, he comes to value giving and sharing (i. e., altruism). Since he needs self-esteem, he values those activities that make others admire him, such as being a leader or achieving in some way that fits in with his culture's definition of success. Since he needs to be autonomous, he values decreasing dependency on adults and peers, and the ability to be self-sufficient. Since he needs beauty in his surroundings, he values things that are beautiful, or aesthetically pleasing.

The order of importance of these values follows, more or less, the hierarchy of needs. Life itself is valued more than anything else. To the extent that needs are not met, values either do not exist or change in importance. The hungry man does not value a "world at peace" nearly as much as he values a loaf of bread. In order to justify his needs, man creates a rational system of values much in the same manner that cognitive dissonance is resolved. Since man is a social animal and satisfaction of his needs depends upon the needs of society being satisfied, he establishes codes or principles by which he may rationally explain why what he is doing is "good" or desirable. Some have even gone so far as to say that man has "invented" God so that he may satisfy his need to live forever or alleviate his anxiety concerning matters such as helplessness, death, etc.

Using Maslow's model as a vehicle for constructing items for the VIC, the staff attempted to devise pictorial representations of objects, persons, and situations to measure values based on the following needs: (1) physiological (healthy vs unhealthy habits pertaining to food, sleep, care of self when sick; bathing; brushing teeth; smoking; health personnel); (2) safety (risk-taking; fears of people, objects, places, animals, and the unknown); (3) love (physical closeness to adults and peers; feelings about parents; feelings about religion; feelings about helping others and sharing; and feelings about home); (4) esteem

(feelings about assuming roles of leadership; pride in own productions; willingness to participate and compete; physical development; and level of aspiration with respect to achievement); (5) beauty (appreciation of sensory experience and creative production); (6) self-actualization (knowing; understanding; learning; maturity; willingness to assume responsibility; independence; honesty; and obedience to authority). Aggression was added because it was considered to be an important disvalue.

The problems encountered in administering these items were described in the final report of the first year (Guilford, Goldberg, & Gupta, 1971). Some of the problems are briefly described in the following paragraphs.

The subjects to whom we presented the pictorial items in pretest (children in kindergarten and grades one through three) were incapable of understanding the concept of competition. Without fail, they were happy to be running a race and it did not matter whether or not they came in first. They were happy to get any grade or award and did not care if they were in second place or not. In the analysis of items finally used, the concept of being admired was irrelevant to any other concept.

Similarly, there was no way to depict self-esteem with respect to physical development that meant anything to these small children. Boys regarded pictures showing themselves lifting heavy objects as "work," not as "strength." Girls regarded a picture of themselves all dressed up and being admired by friends in front of the mirror as showing that they were "pretty," but even the ugliest girls thought of themselves this way.

When it came to interviewing children to find out what they liked about other children, the results were useless. They could easily name a child they admired but when asked to tell why they admired the child or what was special about him, they would search their minds and come up with things like "He has blond hair" or "He tells funny stories."

In summary, children of this age do not conceptualize things in the same manner as do older children and the dimensions of value identified reflected this. When the final 60 items were selected for formal test, 23 of them did not load on any factor. Some of the items designed to measure aggression and some of the items designed to measure safety need or propensity for risk-taking loaded on what was obviously a masculinity factor. It was on that factor that tug-of-war, designed to measure competition, loaded. Other so-called "safety" items (high or low in tree; high or low in swing) disappeared in the analyses and the others designed to measure this need (confronting a snake, entering a dark cave alone, ghosts from a haunted house) all allied themselves with masculinity.

The items designed to measure "love" did not do so. On the contrary, the two items measuring preferring several friends to one defined the sociability factor and the two items measuring physical

closeness to parents defined what is now called the Adult Closeness factor. Those items having to do with taking one's turn, being a leader, pushing a friend in the swing, sharing a cookie, and giving a friend a larger piece of cake than one's own loaded on the selfish-dominant factor we have named Me First.

Physiological need items (those pertaining to health habits and personnel) loaded on the same factor as liking for activities and situations linked to learning and no matter what analyses were performed, continued to do so. It was interesting that when the same instrument was administered to teenagers along with a verbal instrument designed to tap some of the same dimensions, health items again loaded on the academic factor. The one exception was staying in bed when sick, which loaded on social conformity.

One might argue that the constructors of the VIC did not know how to design items. Our reply would be that they don't know children very well. While the model upon which the items were based did not succeed, the dimensions derived were meaningful and consistent and while these dimensions may look like "personality" traits, we contend that they are values and that they fit the original definition given by us that values can (and should) be considered in terms of expressed "liking" or "preference" for objects, persons, and activities that have importance for children in terms of meeting their needs.

Taking our dimensions singly, we justify their inclusion in the domain of values as follows:

1. Sociability, or preference for several friends over one, is a factor often found in personality tests. It is also a dimension one cannot separate from need for Affiliation, often called a value by others.
2. Social Conformity, or preference for doing what one "ought" to do rather than something that is more fun, is obviously a dimension closely allied with moral values of a socialization type.
3. Asocial, or enjoyment of activities that society frowns upon because they are harmful, is also a dimension of morality.
4. Me First has clear implications for values since children scoring high on this dimension are selfish (nonaltruistic) and dominant with little concern for what happens to peers as long as they, themselves, are "first." Children scoring low on this dimension tend to have a need to be passive and nurturant.
5. Although the Aesthetic factor was eliminated for practical reasons, it was very clearly defined in the first year's analysis. Appreciation of beauty has always been acknowledged to be a value.
6. Adult Closeness is a dimension demonstrating a need for physical contact with adults. Children scoring high on it value such demonstrations of love from parents.

7. Academic is a value in the sense that children scoring high on the dimension consider school-related and learning-related activities rewarding or pleasurable and will choose these modes of behavior if they hold the value. As we have seen, it does not mean they will do well in them.
8. Masculinity-Femininity would be considered by most to be a personality trait or an attitude. However, it can also be said that those males high in this characteristic will probably value being "men" and adopting their appropriate roles and role-behaviors while those females low in it will value feminine roles.

To reiterate, briefly, we hold by our definition of values and our rationale in the construction of items for small children. We contend that children will make moral judgments when they perceive their choices are related to "right" and "wrong" because we have seen them do it so often in interviews where some will say, "I like it, but I know it's not nice so I choose the face that says I don't like it." or "I'd rather do this but I know I should do that, so I'll choose it." On the other hand, knowing that at least 90 percent of the children understood the meaning underlying every item, it is safe to say that those choosing to approve or "like" the asocial items and to choose the nonconforming situation or behavior over the conforming one did so with full understanding of their implications and that had they been required to make moral judgments, they would not have demonstrated their true values. That is, had they been asked if the concept was "right" or "wrong," they would have answered in the socially expected manner.

Our approach to the measurement of the values of small children is, therefore, theoretically based, pragmatic, and empirically justified.

Utility of Value Dimensions of the VIC

It is important to ask: Of what value are values as measured by the Values Inventory for Children? Since we cannot go beyond the data, we will simply describe our major findings with respect to each dimension and let the reader draw his own conclusions. The results presented below have only (with one exception - Sociability and sex - to do with predictive validity). Furthermore, ratings of Health Habits and Aesthetics are not considered nor are relationships with non-factor ratings relevant to the dimensions in question.

1. Me First

- a. Valid in the sense that in both pre- and posttest teachers were able to rate high scorers higher than low scorers.
- b. Valid in the sense that high scores were negatively related to achievement (reading scores) in pretest, for the total retest group, and negatively related to achievement in third grade.
- c. For the Oriental child, high scores were negatively related to ratings of good Classroom Behavior.

2. Masculinity

- a. Unrelated to achievement. Obviously related to Masculinity rating.
- b. For Anglos and Mexican-Americans, negatively related to good Classroom Behavior.
- c. For the total retest group, increased scores from pre- to posttest were negatively related to good Classroom Behavior; for Anglos they were also negatively related to Peer Relations.

3. Asocial

- a. Valid in the sense that on posttest, teachers rated high-scorers higher than low-scorers.
- b. Negatively related to achievement in both pre- and posttest for the total group, for boys and girls separately, for grades two and three, and for Anglos.
- c. Increases from pre- to posttest in this value were negatively related to achievement for the total group, for boys and girls separately, for grades two and three, and for Orientals.
- d. Negatively related to adjustment (good Classroom Behavior and good Peer Relations) for the total group, for girls, and for Anglos. Negatively related only to Peer Relations for boys and for Orientals.
- e. Increases from pre- to posttest negatively related to Peer Relations for Orientals.

4. Academic

- a. Positively related to Peer Relations in posttest for total group.
- b. Positively related to rating of Academic Motivation for girls and for Mexican-Americans.
- c. Positively related to good Classroom Behavior for Negroes.
- d. Increasing scores from pre- to posttest positively related to good Classroom Behavior for Orientals.
- e. No relation to achievement.

5. Adult Closeness

- a. Valid in the sense that those scoring higher were rated higher in posttest.
- b. Positively related to Peer Relations for Orientals.
- c. No relation to achievement.

6. Sociability

- a. Positively related to ratings of Masculinity for boys and negatively related for girls, suggesting that more sociable children are more like their own sex.
- b. No relation to achievement.

7. Social Conformity

- a. Valid in the sense that those scoring high were rated higher in Social Conformity on both pre- and posttest for the total group, for boys and girls separately, and for Orientals and Mexican-Americans.
- b. Valid for prediction of achievement for the total retest group, for girls, and for grades one and two.
- c. Valid for prediction of adjustment (good Classroom Behavior and Peer Relations) for the total group of retest children, for girls, and for Mexican-Americans. Positively related to Peer Relations for Orientals.
- d. Increasing scores from pre- to posttest positively related to achievement for the total group.
- e. Increasing scores from pre- to posttest positively related to adjustment for the total group and for Mexican-Americans and to Peer Relations for the Oriental.

As with most such instruments, some dimensions are more useful than others. Although Gorsuch (1971) did not find his scale to be multi-dimensional, the general nature of it was clearly one of value socialization and total scores proved to have utility. Gorsuch has expressed the opinion that value socialization is the same as social conformity and cites Gorsuch and Cattell (1967) who found Catell's (1957) G: Superego factor to be a second-order factor independent of others.

In the VIC, there are two socialization dimensions that are clearly related to achievement and adjustment for young children: Asocial and Social Conformity. That they are independent at young ages seems clear although with age some conformity items take on aspects of morality. The distinguishing conceptual difference between the two lies in the fact that Asocial items are harmful and nonconforming choices on Social Conformity items are not. As children mature, they like Asocial items less and become more likely to make conforming choices on some Social Conformity items. One must consider, too, that the items are in different format and that the response to Asocial is "degree of liking" while response to Social Conformity constitutes a choice between what one ought to do and what is more appealing because it is fun. In analyses of the VIC using older children (junior high school level), these factors tend to merge into one. For younger children, it seems more useful to keep them separate.

Next in degree of usefulness is the Me First factor which represents the degree to which the child wants to get benefits without making any sacrifices. Children who score high on this factor take the most or biggest, dominate the group, refuse to share, and let others wait on them. Although only occasionally predictive of adjustment or achievement, children do tend to decrease in this value with age. It also seemed likely that in combination with other values it might have some effect on achievement. To test this possibility, multiple regressions of factor scores were used in the prediction of reading scores for both pre- and posttest. The results are seen in Table 67 below.

Table 67. Multiple Regression of Pre- and Posttest Factors Scores on Reading (N= 465)

<u>Pretest</u>				<u>Posttest</u>			
<u>Variable</u>	<u>R</u>	<u>r</u>	<u>P</u>	<u>Variable</u>	<u>R</u>	<u>r</u>	<u>P</u>
Social Conform.	.132	.132	.01	Asocial	.209	-.209	.01
Asocial	.163	-.119	.05	Social Conform.	.234	.129	.01
Me First	.179	-.100	.05	Me First	.238	-.089	ns
Sociability	.182	-.029	ns	Adult Closeness	.240	.015	ns
Adult Closeness	.183	.006	ns				

Although the multiple R's are low, as expected, it is evident that Me First value may be used to add to the prediction of achievement.

The validities described above have only to do with achievement in and adjustment to school. Other relationships have been discussed previously. One of the most disappointing findings is that Academic values (i. e., liking for school and school-related activities and situations) do not, at this writing, seem valid despite the fact that they contribute to teacher-child congruities to a great extent and congruities are, in turn, related to criteria. The Sociability dimension which enters to a slight degree into the pretest regression formula, is also one on which children change as they grow older. They develop a preference for more friends as they proceed through school. It should be remembered that in the original VIC, on which validity data are based, this dimension had only two items.

Why Adult Closeness, also with only two items, appears related to both ratings and achievement to some degree is unknown and the writer would not care to speculate on it. This dimension was retained because reactions to it by children in private interview proved very revealing of their affective states regarding parents. Finally, the Masculinity dimension has its primary value in differentiating between ethnic groups although when the sexes are analyzed separately, it is predictive of the classroom adjustment of girls--not boys.

The reader must at all times keep in mind that the validities presented are based on (a) ratings of questionable reliability, and (b) factors of relatively low reliability. It is unfortunate that the expanded (revised)

VIC cannot be validated since those dimensions of importance to teachers have added a sufficient number of items to render them more useful in the search for predictors of school achievement and adjustment.

The utility of the instrument (and/or its dimensions) does not, however, rest entirely upon its validity. It is also quite useful in: (a) differentiating between the sexes; (b) examining changing values with increasing age; (c) differentiating between ethnic groups; (d) examining the differential relationships between values and criteria of achievement and adjustment by sex, grade level, and ethnicity. It has proved useful in another study in differentiating between delinquents and non-delinquents who are considerably older than the children on which it was based (see Appendix J). It is also very useful in a clinical sense, as evidenced in interactions with teachers who attained insights through the examination of children's item responses.

Although the predictive validity of the dimensions seems low, the construct validity, as evidenced by the very clear-cut factor structure, is excellent. This alone justifies its use as a research tool. The internal consistency reliabilities of the revised instrument seem adequate for group application.

Teacher-Child Value Congruities--Their Implications for Adjustment and Achievement

There is a good deal of evidence that values and attitudes have an effect on interpersonal relationships. Rokeach, Smith, and Evans (1960) have developed a theory of prejudice in terms of belief similarity. They propose that reactions to minority-group members are more a function of belief similarity than of ethnic or racial membership. They demonstrated that white subjects making hypothetical choices were more accepting of Negroes who agreed with them on important issues than they were of whites disagreeing with them. These results held up in both northern and southern samples. They also showed that Jewish children accepted Gentiles agreeing with them to a greater extent than they did Jews disagreeing with them. Stein, Hardyck, and Smith (1965) subsequently demonstrated that both race and belief play significant roles with race being more important in the absence of information about beliefs but beliefs on basic issues being more important when both were presented. Smith, Williams, and Willis (1967) included race, sex, and belief in their study of friendship acceptance in six samples and found belief congruence more important than race which was, in turn, more important than sex. The only exception was in a white southern sample in which race was slightly more important. Anderson and Cote (1966) supported these findings with French- and English-speaking Canadians.

Triadis (1961) disagrees with Rokeach with respect to belief similarity and racial prejudice, contending that belief similarity is more relevant for predicting friendship choice because friendship involves a small social distance whereas prejudice involves a much

greater social distance. Insko and Robinson (1967) attempted to test Rokeach's theory in the ninth grade and found that both belief and race were significant determiners of attitude. Rokeach's theory was supported when the semantic differential was used as a measure but not when factor scales derived from Triandis were used.

In a series of investigations using college undergraduates as subjects it has consistently been found that attraction toward a stranger is a positive linear function of the proportion of that stranger's attitudes which are similar to those of the subject (Byrne, 1961; Byrne & Clore, 1966; Byrne & Nelson, 1965; Byrne & Rhamey, 1965). This empirically established relationship has been tentatively called the "law of attraction" (Byrne & Nelson, 1965) and has been shown to hold at age levels as low as nine years (Byrne & Griffit, 1966). The relationship increased, in their study, with increasing age. It is not unlike Newcomb's (1953; 1956; 1961) "Individual System Orientation" in which attraction to an individual is seen as a function of the perceived congruency of attitudes toward some important and relevant nonperson object and the qualities attributed to the other person.

The similarity-attraction hypothesis has been extended to interests in vocations by Hogan, Hall, and Blank (1971) using Holland's (1959) theory of vocational choice and Byrne's (1961) procedure. With 210 male college students they obtained an eta coefficient of .82 between interest similarity and rated attraction. In the area of values, significant relationships have been found between pairs of mutual friends and husband-wife pairs. (e.g., Bonney, 1946; Mitchell, 1951; Precker, 1952; Reader and English, 1947; Richardson, 1940; Schooley, 1936; Thompson & Nishimura, 1952). Reitz (1971) found that the higher a person is in a given value area (using A-V-L categories), the more he is attracted to other people who are similarly high in that value. In addition, when values are negatively correlated, a person high in one such value is likely to be unattracted to persons high in the other value. Precker (1952) found that students tend to select associates and advisors with similar values. Gross (1967) found that teachers were homogeneous with respect to values and hence that pupils who had conflicts with one had them with all. It has also been found that therapists prefer clients with values like their own (Welkowitz, Cohen, & Ortmeyer, 1967).

The effect of congruent beliefs and values on interpersonal attraction may also affect the manner in which individuals evaluate each other. For example, Welkowitz, et al. (1967) found that not only did therapists like patients with similar values better but also tended to rate them as more improved. Cox (1968) found that students rated teachers as more effective when their values are similar. Merritt (1971) found that there was a significant difference between a principal's attraction to teacher candidates with attitudes similar to his own and teacher candidates with dissimilar attitudes. He also found that the effect of similarity of attitudes on attraction to the teacher candidate was more powerful than the effect of the teacher candidate's actual qualifications.

Bills (1952) explored the question of congruence of values between student and instructor as related to scholastic achievement. Those holding the same values as the instructor had higher class marks, based on objective exams, than those of equal mental ability but differing value orientation. Gross (1967) found that value disparities between teachers and students contributed additional significant variance to a multiple regression equation predicting children's grades.

Gorsuch (1971) found that values aided in predicting all his criteria of child adjustment and achievement except for changes in anxiety but the prediction was not so much based on the children's values as on the discrepancies between his values and his teacher's or peers' values.

Precker (1953) tested the hypothesis that individuals tend to attribute their own values to associates whom they choose and found that, first, one chooses associates who demonstrate value-similarity in one or more areas and then fills the gap by attributing to them value similarity in other areas. Lewin and Grable (1945) delineated what they believed to be a cardinal principle in value orientation--namely, that the extent to which an individual identifies with a group will in part determine how much his own value structure is influenced and his degree of acceptance by the group will determine how much the group norm will be modified in his direction. Given the evidence that people tend to join groups (or be attracted to individuals) sharing their attitudes, interests, and values, anyone wishing to remain part of a group will adapt to the norm. Where his values differ, the group norm will be modified in his direction to the extent that the group wishes him to remain a member.

It would seem very apparent that a teacher will like a child better if that child is similar to her in values. In this study, children with higher posttest congruities were rated higher in Academic Motivation, Social Conformity, Academic Ability, Good Classroom Behavior, Good Peer Relations, Adult Closeness, and Satisfactoriness and lower in Asocial Behavior, Me First, and Masculinity.

In addition to children's receiving more favorable ratings if they were more congruent with the teacher, they also received higher reading scores. It was also found that the more like a teacher the child became, the higher he was rated in the same "desirable" characteristics (except Adult Closeness) and the lower he was rated in the undesirable ones. Furthermore, increasing congruity was positively rated to achievement.

According to Gorsuch, the teacher probably plays a greater role in value development than has been suspected. He cites Brofenbrenner (1970) who pointed out that the child is exposed to the teacher for several hours each day while he is with parents much less. However, there is evidence that children are like their parents in such matters as moral knowledge but not like their club leaders, school

teachers, or Sunday school teachers (Harthshorne, May, & Shuttleworth, 1930). Gorsuch said that the impact of the teacher was demonstrated by the fact that, in his study, when children were lower than teachers in Value Socialization, they shifted toward her. When they were already as high as the teacher, they remained unchanged. These phenomena were independent of race. The one exception was lower-class males who became less socialized between first and second testing.

In this study, while it is true that there is a relationship between congruities and both adjustment and achievement as well as between changing congruities and criteria, there is no way in which one can determine whether or not these findings are a function of (a) a simple maturation on the part of children; (b) the fact that the value dimensions measured were such that a child holding to some of them would, by his behavior, induce in the teacher a generally unfavorable attitude toward him; (c) the probable negative relationship between poor behavior or maladjustment and achievement; (d) the confounding of the congruity measure by the masculinity factor and the concomitant "underrating" of boys; or (e) the possible impact of children on teachers. In other words, it would be difficult to conclude that any relationships between congruity and criteria demonstrate teacher impact.

It is certain that if there is any teacher-effect on values it is differential when sexes, grades, and ethnic groups are compared. Achievement, relative to grade, drops off as children progress from first to third grade. Where girls become more "socialized," boys become less so. Whereas most ethnic groups become more like the teacher (and Orientals, especially so), Anglos seem to become less like her. There is also a differential effect depending on the teacher and the class. Some classes become more like teachers while others become less like them. This is partly a function of class composition (ethnicity, socioeconomic status) but is not confined to the middle class since within the predominantly Mexican-American and Negro schools some teacher-class congruities increased, and within the predominantly Anglo and Oriental schools, some decreased.

It would have been fruitful to explore the differences between those teachers whose classes increased in congruity with them and those whose classes decreased. Not only would it be useful to know the differences in values of these teachers, but also the differences in the manner in which they teach. It would also have been fruitful to explore the effect of child-peer congruencies. Both of these tasks were beyond the scope of the study. All we can conclude on the basis of our evidence is that to the extent that children are "like" their teachers and/or become more like them in certain values, they are likely to be somewhat better adjusted to school and to do better in their schoolwork.

There are two interesting postscripts to this phenomenon. First, had masculinity been eliminated from the congruity measure, it is likely that congruities would have been higher and would have had different relationships to ratings since boys were uniformly rated

less "desirable" on most scales. Second, although liking for academic matters constitutes one of the most important dimensions in the measurement of congruity, it, itself, is unrelated to achievement. So is Masculinity. Thus, the relationship between congruity and achievement must be based primarily on the dimensions of socialization--Social Conformity and Asocial.

Unfortunately, the relationships found cannot be partialled out from intelligence or ability since no measures were available and the ability rating was of questionable reliability and validity. There is much more to be done in the area of investigation of the impact of the teacher on the values of children and the consequent impact of child value change on child adjustment to and achievement in school. It is also necessary to examine the congruence of child with parents and parents with teacher and the relationship of these congruencies to achievement. This, too, was beyond the scope of the study although it is hoped that Ryan (1971) will shed light on the subject when her project is completed.

Stability of Values

To what extent values remain stable over a period of time, be it months or years, is best determined by means of longitudinal studies of the same subjects and is also dependent upon the definition of values.

Murphy and Murphy (1931) have questioned whether or not attributing a "system of values" to a young child is not implying more conceptualization than can be expected of him. Werner (1948) believed that young children have flexible scales of values and showed how they changed to meet the demands of the current situation as a function of age level. Indications of fairly well-developed social values and attitudes in young children were found by Radke-Yarrow, Trager, and Davis (1949) in an examination of children aged five to eight. Eberhart (1942) demonstrated that six year old children have respect for the property of others. Whether this respect for property is based on a fear of punishment in the earlier years, as many developmentalists would postulate, makes little difference provided that the value is held and the child behaves in terms of it.

Turner (1948) found changes in aesthetic values with age. Piaget (1948), as is well known, believes that the young child is a moral realist--a product of his realism and of adult restraint. By this theory, in the first stages of moral development the child judges acts in terms of their material consequences instead of the intentions of those performing them. Cooperation and autonomy eventually replace egocentrism and restraint. Kohlberg (1969) has found children to become more mature in their moral reasoning over the years as have Kagan and Moss (1962). Developmental studies of ethical insight (e.g., Hollingsworth, 1949), selfishness (e.g., Ugurel-Semin, 1952), and interiorization of moral norms (e.g., Beller, 1949) suggest that there are definite age differences, at least with respect to moral values.

At what age values become stable remains a moot question. Gribbons and Lohnes (1965) measured the values of children over a five year period, starting with grades 8, 9, and 10, and found that values had already stabilized in the eighth grade. Perrone (1967) examined the values of junior high school pupils and their parents over a period of two years and found both parents and daughters changing to become more congruent while boys and parents remained incongruent. During World War II, Spindler (1959) found a stability of values in Americans of both sexes and all social classes who were in the military situation. Beech and Schoeppe (1970) found a great stability of rankings of values across grades 5, 7, 9, and 11.

That adults are stable in interests and that that stability begins around age 25 has been demonstrated amply in the studies of the Strong Vocational Interest Blank (Campbell, 1971). What is liked at 25 is liked even better and what is disliked is more disliked with succeeding years. As Gorsuch (1971) points out, the values of teachers are quite stable.

In this study, there were two ways to assess stability. The first was an assessment of the differences between children at succeeding grade levels. This was done by comparing factor scores for value dimensions at each grade level assessed for both the retest group, using the acceptable portion of the original VIC, and for a different group, using the factor scores for the revised VIC. The second approach was to evaluate the changes which occurred in the same children over a period of eight months.

When grades were compared on the basis of Spring test children, with respect to selfishness and dominance (Me First), the first-graders were highest, followed by second-graders. Grades 3, 4, and 5 did not differ. Third grade children scored higher on Masculinity (largely composed of items relating to absence of fears and willingness to take risks) than did first grade children. Fifth grade children scored higher than all others. With respect to Asocial, there was a diminishing of this value; scores decreased significantly from first grade to second, from second to third, and from fourth to fifth. Academic values, on the other hand, decreased steadily through the fourth grade. Third grade children proved to be higher in Sociability value than did either first or second grade children. This value ceased to increase beyond grade 3.

When examining the total retest group, the following results were found for change over the eight-month period. Children became higher in values of Masculinity, Sociability, and Social Conformity and lower in values of Academic, Me First and Asocial. These changes were not tested for significance but were, in general, in the direction of increasing socialization and maturity with the exception of a reverse on the part of third graders in Social Conformity. The only significant change score was an increase in Me First on the part of first-graders.

When sexes were compared, changes were differential with girls changing in directions opposite from boys. In general, girls became

more socialized and mature while boys seemed to become less so. When ethnic groups were compared, Anglos were typified by decreasing Asocial and Academic values and increasing Masculinity. Negroes and Mexican-Americans demonstrated increasing Asocial values and Mexican-Americans were also becoming more selfish and dominant. Orientals were becoming more socialized than any other group, increasing in Social Conformity and decreasing in both Asocial and Me First. Thus, it can be seen, that while there are changes with age, these changes are not the same for all children and are influenced by sex, ethnicity, and, probably, by many other variables.

Examination of differences between grade levels using the revised VIC and grades 1, 2, 3, and 4 in Fall test schools showed that there were no differences in either Social Conformity or Masculinity values. Had grade 5 been included, the decrease in conformity seen in the Spring sample might have made itself evident. So might the increase in Masculinity found in that sample appear.

Decreasing Asocial scores from grades one through three appeared in the Fall revised test sample as they had in the original sample tested in the spring. This decrease seems to stabilize at grade 3. Increasing Sociability value is seen with the revised test just as it was with the original form. Once again, the increase seems to cease at about third grade. Another consistent change is the reduction in Me First scores from first grade to third. With the original form, this reduction continued to grade three; with the new form it apparently halted in grade 2. Academic scores pose some problem since with the revised form of the test it was found that grade two scored significantly higher than either one or four but with the original test, the Academic value continued to decrease through grade 4. Adult Closeness also received conflicting results. In the Fall sample, grades 2 and 3 seemed to be higher than grade 1, and 3 was also higher than 4. In the Spring, sample, grade 1 was higher than either 4 or 5. It should be remembered that this dimension was not expanded and so consists of only two items in the revised VIC.

Sex and Values

That there are differences between the sexes with respect to dimensions of value is an uncontested fact. Investigation of these differences during the first years of school has not been extensive. The results of this study confirm those of previous studies concerned with males and females of all ages. A review of the literature would render this section so lengthy as to be beyond any reader's tolerance. There are, however, a few generalizations that can be made.

First, girls become socialized before boys do and tend to be more "people-oriented." Second, the general consensus is that while girls and boys differ with respect to some values, when it comes to "morality," they do not differ. Third, there is no consensus when it comes to differentially relating values (attitudes, interests, etc.) to achievement except where achievement measures are differential.

In general, girls are supposed to be more verbal than boys and boys are considered to be superior in matters quantitative. Their interests coincide with their divergent abilities. To what extent the differences are biological as opposed to cultural is undetermined.

In this study, comparing retest girls with retest boys, the only value in which boys were higher (understandably) was Masculinity. Girls, on the other hand, were higher than boys in Adult Closeness, Sociability, and Social Conformity. Most interesting is the fact that girls did not show, either in the first year's testing or the Spring retesting, any difference from boys with respect to Asocial, the dimension best representing "morality." For both boys and girls, the Asocial value was negatively related to reading scores and for girls the same held true of the Social Conformity value. However, there were no differences between the sexes with respect to this verbal measure of achievement.

When it came to changing values, boys increased in Masculinity and girls increased in Adult Closeness, Sociability, and Social Conformity. In general, girls became more "socialized" than boys but their changes did not relate to the Asocial dimension of morality. It should be noted that while girls were increasing in Social Conformity, boys were decreasing. However, since Social Conformity was unrelated to achievement for boys, perhaps their increase is unimportant. While girls were becoming more sociable, boys were becoming less so. That the sexes did not differ with respect to the dominant and selfish characteristic labeled Me First is interesting. The results support those of other investigators except with respect to Academic value in which girls are expected to be higher but, in the first three grades, were not.

When the revised VIC was administered to a new sample of 1167 children, the results for sex comparisons were consistent with those for the original sample. In this comparison, boys were higher not only in Masculinity, but also in the expanded Me First dimension. Girls were higher in Sociability, Academic, Social Conformity, and Adult Closeness. Once again, the Asocial dimension did not differentiate between the sexes.

Ethnicity and Values

This section does not pretend to present an exhaustive account of the literature relating to the values of divergent ethnic groups. However, there are a few recent and particularly relevant comparisons between Anglos and Mexican-Americans (Hepner, 1971; Schwartz, 1969), and Anglos and Japanese (Schwartz, 1970). These and other references will be briefly cited where findings are pertinent to this study in the sense that the values measured are similar to those measured here and/or the values of children are involved.

Negroes

A review of the differences between Negroes and whites by Dreger and Miller (1960), which included differences in values and served as a continuation of a review of Klineberg (1944), was concerned primarily with adults and the Allport-Vernon Study of Values. The only non-A-V instrument was one employed by Somner and Killian (1954) who asked Negroes and whites to rate the "desirable" behaviors of a "Negro." Negroes wanted the Negro to be relatively forward, passionate, elegant, aggressive, and persistent whereas whites wanted him to be witty, jovial, practical, quiet and patient--an interesting commentary on white versus Negro attitudes toward the role of the black man in society. Dreger and Miller summarize by saying "Insofar as generalizations can be made from sheer weight, the evidence points to similarities in the value systems of whites and Negroes" (p. 386).

Harris (1970) reported that the level of maturity of moral attitudes is related to race, social class, and intelligence with the latter correlating .49 with a combination of moral attitude subscales. When Negroes and Anglos were compared, social class had slightly more influence than race but Negro children ages 9 1/2 to 11 1/2 were less mature in moral attitudes than whites of the same age and class on two subtests. Greenberger, Campbell, Sorensen, and O'Connor (1971) state that one should expect Negroes to score lower on psychosocial maturity than whites partially because of the value differences between black and white cultures (Deutsch, Katz, and Jensen, 1968). In their study, Greenberger, et al. found that Negroes were less mature at grade five but that the gap between them and whites, had closed during the course of the six years between fifth and eleventh grade. This may be partially due, as they say, to differential dropout rates affecting the composition of the eleventh grade sample. If Negroes are slow to become socialized, it is to be expected that they will score lower on the VIC on Social Conformity and higher on both Asocial and Me First. With respect to Sociability, it is difficult to predict on the basis of the literature. Gorsuch and Smith (1970) reported that when open-ended value questions were asked of Negroes and whites, the Negroes more often mentioned affiliation as a value. Dowd (1966) found that while Anglos thought friendliness and helpfulness were the most important values for peers to have, Negroes placed the greatest importance on politeness and respect. Anglos never mentioned these latter characteristics.

Looking at the posttest results of the Negro retest group it is seen that they scored higher in Me First than did either the Anglo or Oriental. They also scored lower in Masculinity and higher in Academic than did the Anglos and higher than Orientals in Asocial. Their Social Conformity scores were lower than those of Orientals. These latter two findings are less a function of Negro differences than of the exceptional nature of Orientals, to be discussed later. In general, the Negro children in the retest group were more like the Mexican-American children but not spectacularly different from either Anglos or Orientals. Their lower Masculine and higher Academic scores in comparison with Anglos are a function of the unique characteristics of Anglos who were higher in

Masculinity and lower in Academic than any other group.

In the analysis of the Fall group of 254 Negroes, using the revised VIC, the outstanding feature of the Negro was his relatively higher score in Me First. The Negro children were significantly more selfish and dominant than either the Anglos or Mexican-Americans.

Orientals

Orientals are extraordinarily interesting--more so in this study because they are integrated with Anglos and yet demonstrate consistently different characteristics. Schwartz (1970) says of the Japanese (who make up almost 95% of the Oriental group in this study):

Americans of Japanese ancestry--who comprise only one fourth of one percent of the population--rank higher than any other physically identifiable subgroup on positive attributes like education and income, and lowest on negative attributes like unemployment, crime, and delinquency... comparisons of objective test scores for Los Angeles City public school pupils show that the performance of Japanese-Americans is considerably higher than that of other minority groups and, in all but one instance, higher than Anglos (p. 1)

She goes on to say that there is little consensus on which cultural values--Japanese or American--are responsible for their achievement. She cites Kitano (1969) who says "Scratch a Japanese American and find a white Anglo-Saxon Protestant." She also cites Arkoff (1959), Babcock & Caudill (1958), Caudill & De Vos (1966), and Iga (1957) for demonstration that Japanese-Americans acquire some selected middle class American values. However, there are opposing views that maintain that the Japanese-American has his own cultural values. Caudill (1952) is quoted as saying that:

It is one of the major tenets of this report that while the overt behavior of the Nisei may, in many situations, be indistinguishable from the behavior of the white middle class, this behavior arises in considerable part from a Japanese system of values and personality structure (p. 29)

Most authorities on the Japanese and Japanese-American are agreed that the traditional values of the culture are orientation toward the family unit in its nuclear and extended forms, subordination of the individual to the collectivity, sense of duty, reliance on order and hierarchy, respect for authority, and rational means to attain long-range goals. Schwartz holds to the thesis that the success of Japanese-American public school pupils depends more on the value orientations that differentiate them from Anglos than upon the value orientations held in common. Acculturation alone (i.e., internalization of the values of the American culture) does not adequately account for their achievement.

In her study, Schwartz measured the values of a subsample of 254 Japanese-American children drawn from a larger measured sample of 2200 Los Angeles pupils in grades 6, 9, and 12. For these children 60% of the parents had graduated from high school and of those, one third of the mothers and 50% of the fathers had had some college although their backgrounds were both white- and blue-collar. When children from parents in these occupational categories were compared there was little difference with respect to demographic variables, performance in school, or values. Schwartz notes the high value of education for the Japanese both before and after immigration. Parents identify education as the major instrument for the occupational mobility of their children and have a "fierce" drive for upward mobility (Caudill, 1952; Kitano, 1969).

Results showed that Japanese were more expressive in their orientation toward school and more favorable toward formal school compliance and family authority than Anglos. They were also high in expressed independence from peers. However, they rejected the notion of individual autonomy and accepted the authority structure of both family and school. They were more likely than Anglos to "like school" and to think of it as a place to have fun. Their dependence on peer approval was related to achievement whereas this was not true of Anglos. Anglos were less accepting of formal school norms. Schwartz concluded that the comparatively higher achievement of Japanese-Americans is related more to the traditional Japanese cultural values than to acquired American values.

The observations made by Schwartz were confirmed here in the posttest analysis of retest children. Oriental (primarily Japanese) children scored lower in Asocial than either Mexican-Americans or Negroes and higher than any other group on Social Conformity. They also scored lower on Adult Closeness than did either Anglos or Mexican-Americans and lower in Masculinity than the very Masculine Anglos. They were higher in Academic value than their low Academic Anglo classmates.

When it came to value changes between pre- and posttest, Orientals were seen to decrease in Me First, Asocial, and Social Conformity. Perhaps the latter change was a function of their initially very high conformity. They were the most congruous with their teacher in values of any group and despite this initial high congruity, became moreso as the school year progressed. They were rated higher in Peer Relations than were Mexican-Americans but the latter group was rated lower than any other. It is interesting to note that the more like the teacher the Oriental is (i.e., the higher the value congruity), the higher he is rated in Peer Relations and the lower he is rated in Masculinity. The same relationship holds for increasing congruity. It has already been noted that the reading scores of the Oriental are much higher than those of any other group. It was unfortunate that the Fall test group did not contain a sufficient number of Orientals for comparison with other ethnic groups.

Anglos

To review the literature relating to Anglo values would be impossible. Almost all studies in which other ethnic groups are examined use the Anglo as a comparison group. It is more or less assumed that he constitutes the norm for middle-class values--those values believed to prevail in the predominant American culture. Therefore, he is used as a "norm" against which those "less fortunate" are measured. As we have just seen, values of the Oriental are by no means less favorable for adjustment to and achievement in school but, rather, are much more favorable. Perhaps it is these values toward which schools should orient themselves although by the time the child reaches school it may well be too late. The subject of what the schools should and should not do with respect to "teaching" values is taken up in a later section. Meanwhile let us consider the Anglo in this study.

First, and most important, is the lack of interest evidenced by Anglos in matters pertaining to school. In this respect he is not only inferior to the other three groups, but becomes even less motivated as the school year progresses. Even his teacher perceives his low motivation. In addition, he has a unique tendency to start out more masculine in his values than do most members of other ethnic groups and to become higher in masculinity as the year progresses. Thus, he likes those "manly" and "fearless" qualities of the stereotyped male. At the same time, he is less Asocial and lower in Me First than are either Negroes or Mexican-Americans and although having a lower Social Conformity value than the Oriental, is still more conforming than the other two groups. He also likes being close to adults better than does the Oriental, but so does the Mexican-American, and the Oriental is low in this value.

It is fortunate that neither Masculinity nor Academic value affect his achievement insofar as can be determined from the analyses in this study. It is evident, nevertheless, that even when in a school where his classmates are predominantly Anglo and Oriental, he does not achieve as well as the Oriental. For the Anglo, Asocial value is negatively related to achievement. It is also interesting to note that while his congruity with the teacher differs only from that of the more congruous Oriental, that congruity is unrelated to achievement but is positively related to the ratings he receives in Classroom Behavior and Satisfactoriness. In terms of the values measured here, the Oriental "looks" more like the middle-class Anglo than the middle class Anglo does. Comparisons with other groups are probably contaminated by socioeconomic differences.

In the Fall test group, using the revised VIC, there were 482 Anglos in the integrated and middle to lower-middle class districts. These Anglo children had two characteristics which differentiated them from both Negroes and Mexican-Americans: (1) they scored lower in Asocial; (2) they scored lower in Academic. These findings are consistent with those from the Spring sample using the original VIC.

Mexican-Americans

The Mexican-American child has been receiving a great deal of study of late and there is concern on the part of educators with respect to conflict in values between this subculture and the school. Hepner (1971) contends that children from Mexican-American backgrounds are misunderstood because they do not seem to conform to the middle-class values and standards of behaviors. In her study of Mexican-American achievers and underachievers as compared with Anglo-American achievers among ninth grade boys, she attempted to identify differences in values. Among the relevant findings were that Mexican-American boys, even though underachieving in school, (a) valued grades and education; (b) were closer emotionally to their peer group than to their parents than were Anglo boys; (c) rejected the American cultural value of "leadership;" and (d) resisted the American school and culture by retaining a healthy, masculine identity and not allowing themselves to become over-socialized.

Other studies of Mexican-Americans have found that they score higher on family values and authoritarianism than do middle class Anglos (e.g., Ramirez, 1967). Peck (1967) reported on a study done by himself and Diaz-Guerrero in which they found the cultural pattern of the Mexican-American national to be characterized by a close knit, highly emotionalized interdependence and dutifulness within a firmly authoritarian framework. Henderson and Merritt (1968) also found Mexican-Americans high in "extended family," in valuing family life, in preferring relatives as associates, and in desire to travel to visit relatives.

Schwartz (1969), as part of a larger survey, compared the values of 596 Mexican-American high school students with those of 453 Anglos in the same school district. She found: (a) that there were some substantial differences when youth from similar socioeconomic backgrounds were compared; (b) that Mexican-American pupils from families of high socioeconomic status were more like Anglo pupils in value orientations than were those from lower socioeconomic status; (c) that differences in value orientation diminished from the ninth to the twelfth grade (a phenomenon undoubtedly affected by the high drop-out rate of the Mexican-American); and (d) that Mexican-American pupils in integrated schools had value orientations more similar to those of Anglos than did those in more segregated schools. She also found that there were fewer differences in values between Anglo boys and girls than between Mexican-American boys and girls and that the value orientations of Mexican-American boys were more similar to those of Anglos than to those of their female counterparts. Mexican-Americans were as oriented toward school as were Anglos. However, larger proportions of Mexican-Americans than Anglos accepted wide-scope family authority, viewed their own destiny with resignation and their fellow man with caution, and were more concerned with disapproval of parents. Fewer Mexican-Americans were reluctant to settle conflicts by physical means and fewer liked interpersonal responsibility. Some of these value orientations were related to achievement but since they are not included in the VIC, they will not be discussed further.

From analysis of the posttest results of the Mexican-Americans it was found that they were higher in Asocial and Me First values and lower in Social Conformity than either Anglos or Orientals. They also increased in both Asocial and Me First as the school year progressed. They were also higher in Academic and lower in Masculinity than the Anglos, who were at the extremes in these values. They shared with the Anglo a higher score in Adult Closeness than that attained by the Orientals. Although their values did not predict achievement, they did predict adjustment to school. Good classroom behavior was positively related to their scores on Social Conformity and negatively to their scores on Masculinity. They are the only group for which congruity with the teacher bears a relationship (positive) to reading scores. Increasing congruity is also related to achievement.

Because the original Mexican-American group on whom the test was partially based lived in a segregated community at a poverty level and because within the two other school districts there were a large number of Mexican-Americans integrated either with Anglos and Orientals or with Negroes, the investigators decided to compare the values of these children. The results were as follows: (1) Mexican-American children in a segregated school valued school more than did those in integrated schools; (2) Mexican-American children in the predominantly Anglo and Oriental schools valued Social Conformity more than did those in the segregated school; (3) Mexican-American children in a predominantly Negro school district valued school less than did their non-Mexican-American classmates; (4) Mexican-American children in a predominantly Anglo and Oriental school district scored higher than their non-Mexican-American classmates in Asocial value and lower in Social Conformity. They were also lower in acceptance of the value of Adult Closeness.

The Fall test sample, using the revised VIC, included 431 Mexican-American children who were compared with 254 Negroes and 482 Anglos. These children are all in integrated schools and their socioeconomic level is middle of lower-middle class. Results of the comparisons showed that the major differentiating characteristic of the Mexican-American was his lower score in the dimension of Masculinity in which both Negroes and Anglos exceeded him.

Teacher Perceptions of Children

As Gorsuch (1971) has stated, teacher perceptions of children as reflected in ratings are generally conceded to be global in nature and subject to halo effects. They are also subject to other distortions.

In this study, children were rated only once so there was no chance to evaluate shifts in perception over time, as Gorsuch did. However, it was possible to examine the structure of ratings through factor analysis and to compare ratings of values (teachers' perceptions of values held by children) with the actual values of those children. This latter process is the inverse of relating values to ratings when ratings are considered as criteria.

Finally, it was possible to determine to what extent ratings were related to achievement. That is, which perceptual variables weigh most heavily in the prediction of child achievement. It is impossible to determine whether it is that the child who does well in school is perceived as being higher in these variables as a function of his achievement or whether, on the other hand, that the child who has these characteristics is also the one who achieves. Further research would be required to determine the direction of the causal arrow but it is suspected that there is an interaction between the two. That is, the teacher perceives achieving children favorably in other respects but children who are favorable in other respects are also, most likely, achieving better than those who are not. Thus, favorably perceived children may be subject to teacher favoritism, leading to achievement, and unfavorably perceived children may be subject to teacher rejection, leading to underachievement. Similarly, well behaved children are probably favorably perceived in other respects and these children may be subject to the favoritism not accorded to badly behaved children.

First, identification of the structure of the 13 ratings was based on a factor analysis of these ratings. Three factors emerged and although not named, the first was one in which major loadings were for good behavior, and the values associated with it--social conformity, submissiveness and unselfishness, non-asocial behavior, getting along with classmates, and being a girl. The child who fit this description was liked by the teacher. The second factor was one in which the child was liked because he was a good "student"--that is, he was high in academic motivation and ability. He was also one who liked people and got along well with classmates as well as practiced good health habits. The third rating factor was one which included only two variables--aesthetic appreciation and liking for physical relationships with adults. That these two should fall together is interesting in view of two other findings from previous study, namely: (1) these two ratings are irrelevant to teachers and unrelated to most values; and (2) the corresponding two dimensions of value as measured by the test consistently bore positive relationships to each other when the aesthetic dimension was still part of the test. It would seem that teachers have two types of "satisfactory children". One is a "good child" and the other is a "good student". The former would seem to be more satisfactory than the latter since Satisfactoriness loaded .62 on factor I and only .37 on factor II. The only other overlap between the two was with respect to getting along with peers.

Next, it is instructive to look at perceptions of children as related to the actual values of children by sex, grade, and ethnic group. As has been reiterated, boys are perceived negatively while girls are perceived positively. This is not a new finding since the research literature is replete with similar findings. When it comes to conformity between ratings and values, however, we find boys rated higher than girls in both Asocial Behavior and Me First characteristics although they do not score higher on these dimensions in the group rated. Girls, on the other hand, are rated higher in Academic Motivation, Adult Closeness, Social Conformity, Academic Ability, Classroom Behavior,

Peer Relations, and Satisfactoriness. They score higher than boys only in Adult Closeness, Sociability, and Social Conformity. Furthermore, they do not achieve any more than boys do with respect to reading and despite the fact that Academic Ability is correlated with achievement, are probably no more capable.

When it comes to grades, second-graders receive the most favorable ratings and third-graders, the least favorable. The only instances in which ratings coincided with actual values were as follows:

1. First graders and second-graders were rated higher than and scored higher than third in Academic Motivation.
2. Second graders were rated as less Asocial and scored lower in this value than first graders.

In all other respects the perceptions were either in conflict with, or simply irrelevant to the children's actual values. For example, third grade children were rated more Asocial than either first or second, but their Asocial score was significantly lower than that of either first or second grade children. Third grade children were rated as less satisfactory with respect to other aspects of personal and school adjustment than either first or second but their dominance and selfishness (Me First) was less than that of second-graders who, in turn, were higher in this undesirable characteristic than were first grade children despite their "favorable" ratings. Furthermore, these negatively perceived third grade children were more congruous with their teacher in values than were first-graders who, nevertheless, were rated higher than third in Social Conformity, Academic Motivation, Academic Ability, and Peer Relations.

It is interesting to note that the perception by teachers of decreasing Academic Motivation and the coincident decrease in Academic value is accompanied by a decrease in achievement relative to grade level. In this one respect, perceptions are consistent. Their inconsistencies need further exploration but it is hypothesized (1) that the first-grader is permitted more latitude in his adjustment and that by the end of eight months in school (the time when ratings were made), he has "settled down" quite a bit; (2) the second-grader has settled down even more and is at a cooperative and unrebelling age; and (3) the third-grader is better aware of what he "ought" to do but is beginning to question authority and to be "turned off" by school and more "turned on" by his own social life. This last hypothesis is supported by the finding of increasing sociability throughout the grades.

Finally, ethnic comparisons provide interesting insights. The Anglo is correctly perceived by his teacher as being less academically motivated than the Negro, Oriental, or Mexican-American. He scores lower than any of these groups in Academic value despite the fact that he achieves almost as well as the Oriental and far better than either the Negro or Mexican-American. The Negro is perceived as being more sociable than either the Anglo or Oriental but the only difference in values between him and these two groups is in selfishness

and dominance in which he is significantly higher. The Oriental is correctly perceived as being more socialized than other groups. His high rating in Social Conformity and low rating in Asocial Behavior are consistent with his scores in the same values. He is also correctly perceived as being higher in Academic Ability than others since his reading scores are higher. He is not, however, higher in Academic value. The Mexican-American child is correctly perceived as being more selfish and dominant than either Orientals or Anglos since he scores higher in Me First than do members of these groups. The same holds true for Asocial Behavior in which he is rated higher than all others and scores higher than Anglos or Orientals in Asocial value. Interestingly, he is rated higher than Anglos in Sociability but lower than all others in Peer Relations. Evidently, the teacher perceives him as having intensive interpersonal relations of a negative sort.

What can be concluded from these comparisons? First, teacher perceptions seem quite distorted by the factor of sex and, to a lesser extent, that of grade level. When it comes to examining the relationship between ratings and actual values by ethnic group, however, perception is apparently much less distorted. In general, to attain the most favorable ratings from a teacher, a child should be (1) a girl; (2) an Oriental; (3) a second-grader; (4) high in Social Conformity value; (5) low in Asocial value; (6) well-behaved in class; and (7) an academic achiever.

To determine to what extent ratings (subjective criteria) were related to reading scores (objective criteria), a multiple regression of ratings on reading scores for those 465 children whose scores were available was computed. The results are shown in Table 68 below.

Table 68. Multiple Regression of Ratings in the Prediction of Reading Scores (N=611)

<u>Rating</u>	<u>R</u>	<u>r</u>	<u>P</u>
Academic Ability	.417	.417	<.01
Classroom Behavior	.491	.363	<.01
Peer Relations	.506	.347	<.01
Academic Motivation	.517	.239	<.01
Asocial Behavior	.523	-.265	<.01
Adult Closeness	.528	-.054	ns
Social Conformity	.530	.349	<.01

It can be seen from Table 70 that the ratings entering into the regression equation involve, excluding ability, adjustment to the school situation in behavioral and motivational terms. It is interesting that the teacher's liking for the child (in terms of the rating of "Satisfactoriness") does not enter into the equation but liking for closeness to adults does despite its non-significant correlation with achievement. This finding would seem to negate the notion that teachers favor those children who

achieve. Further fuel can be added to the controversial fire by recalling that although girls are better-liked by teachers, they do not achieve more. On the other hand, Orientals are the highest achievers and best-liked group. To add to the confusion, second-grade children are the best liked but not the highest achievers to their grade. The reader is left to his own conclusions. Regardless of the "truth" of the matter, it is comforting to know that teachers tend to like most children even when their behavior is maladaptive and their achievement below par.

CHAPTER NINE

CONCLUSIONS AND RECOMMENDATIONS

Implications of Research Findings for Educators

There are two basic questions concerning values and education: (1) Do the values of children bear any relationship to adjustment to and achievement in school? and (2) does the school have any right to "teach" values? This project has addressed itself to the first question but every research worker has a right to express an opinion or, more aptly, make a value judgment when it comes to the second question.

The original proposal to develop the Values Inventory for Children was inspired by the concern of educators with the values of school children, particularly in the elementary grades. This concern is two-fold: (1) values nourished in the schools must be commensurate with the emotional and social well-being of the child who is developing into the future citizen; (2) values are believed to be related to achievement in school.

According to Schwartz (1969), the relationship between values and personal activity leading to various measures of scholastic success, particularly for Anglo pupils, is well documented in sociological literature. She cites Brim (1954), Brookover (1962), Central Advisory Council for Education (1967), Kahl (1953), Rosen (1956), Rosenberg (1965), Straus (1962), and the U. S. Office of Education (1966). Her work also bears out the differential relationships between values and achievement as a function of sex, ethnicity, and socioeconomic status (Schwartz, 1969; 1970). In the application of the VIC, results were not so gratifying but it is to be remembered that they were based on only 30 items and seven dimensions, not all of which could be expected to relate to achievement. Suffice it to say that it seems evident that values do play some role in achievement and that they most certainly play a role in adjustment to school and society. The preliminary study of delinquents and nondelinquents in Appendix J provides sufficient evidence that the values of delinquents are quite different from those of children who do not come into conflict with society. Further evidence that delinquents reject middle class values and the usual means of obtaining middle class goals can be found in Landis and Scarpitti (1965) and Scarpitti (1965). If values can be altered and if they affect social adjustment to such a degree as to lead to delinquency or criminal behavior, such alterations would seem justified in the interests of both the individual and the society in which he lives.

Greenberger and Sorensen (1971) and Greenberger, et al. (1971) have been much concerned with the problem of psychosocial maturity. They point out that since Dewey, American educators have been "familiar with the view that schools should attempt to influence the moral and social development of the child as directly as they promote academic goals" (Greenberger and Sorensen, 1971, p. 1). Clausen (1963) has argued that:

...in any democratic society where social origins are associated with grossly varying cultural orientations, the attainment of responsible citizenship by the bulk of the population is largely dependent on the educational system. The assimilation of ethnic and other minorities requires that agents from outside the family provide orientation to the larger society and its values...Further, if alienation of large segments of the population is to be avoided, the moral commitment of citizens to the dominant values of the society is also requisite (pp. 154-155).

Greenberger and Sorensen (1971) point out that any attempt to specify non-academic goals for schools is likely to encounter strong resistance. They attribute this partly to the belief that the selection of specific goals must be based on value judgments and there is a wide variation in attitudes and behaviors which are valued in this society. Cloward and Jones (1963) believe that the difficulties Negro children encounter in school are attributable to the failure of the school to recognize the distinctive systems of values and goals of minority groups. This belief is supported by Cheyney (1966) who states that teachers of the disadvantaged generally come from middle-class backgrounds and have middle-class values and attitudes which are in conflict with those of children raised in slum areas. Hepner (1971) argues that schools should be changed to reflect cultural differences and teachers retrained to understand cultural values different from their own. In a personal interview, she was quoted as saying: "It would be foolish and destructive to overwhelm the Mexican-American boy with Anglo cultural values, and to make him over to fit the school's rigid stratum." She believes that underachieving Mexican-American students are better adjusted and have more self-esteem than their Anglo classmates but their adjustment is to their peers rather than to the school or teacher. In the study of the VIC the opposite was found--Mexican-Americans were least able to get along with their classmates and quite high in liking for school and teacher.

There are several things to be said concerning the debate over the "right" or "responsibility" of the school with respect to inculcating values. First, it seems obvious that regardless of whether or not the schools make a deliberate attempt to impart values, they will do so. The real question is what values does the taxpayer want them to impart and to what extent does he want "value education" to compete with technical education? It can be assumed that no parent wishes his child to fail in school nor does any parent wish to have his child become a "behavior problem." On the other hand, there is great concern among some ethnic minorities that some values imparted by the schools are in conflict with some values that they hold to be important in their subcultures. Therefore, it behooves the educational system to delineate those values necessary for adjustment to and success in school, as well as those necessary for adjustment to and success in society. On the other hand, where a subculture clings to a value which is detrimental to its goals (as, for example, the Mexican-American who places high value on education but also expounds the concept of "machismo") some resolution is necessary.

Second, it behooves the educational system to reevaluate its goals with respect to achievement. In other words, it is necessary to redefine the concept of "success" both in school and society. The basic American tenet has always been one of upward mobility wherein one hoped that each succeeding generation would attain an occupational status higher than that of the one before. This is patently not possible. If everyone is a professional, who will do the non-professional work so necessary to keep the wheels of society turning? Furthermore, not all citizens are attuned to professionalism. Orientals and Jews are very much oriented toward professions. Mexican-Americans have been shown to be more more attuned to technical occupations. If the schools attempt to establish criteria of "success" for children, those who cannot (either because of inability of disinclination) meet these criteria are destined to be disillusioned and dissatisfied with their lot in life. There are, of course, certain basic skills that must be attained for survival. Children must learn to read. They must learn to handle mathematics if they are to function in a world full of numbers. They must also learn how to get along with other people. There would seem to be no reason why any child cannot be sufficiently socialized to be a responsible and considerate citizen while, at the same time, maintaining his own unique set of values. It is the opinion of this writer that the school has no right to "teach" any values unnecessary for preparation for adult membership in this variegated society.

The schools in this country are the last bastion of the conservative, white, Anglo-Saxon, Protestant ethic--an ethic that is rapidly changing in such a manner as to devalue work as an end in itself and to supplant the work ethic with an increasing humanistic orientation. It has been suggested that the measure of a nation should not be its Gross National Product but its Gross National Happiness (see Time, 1972). The shift in values is from economic to social, creative, and recreative. If this shift in values reduces the incidence of heart attacks, ulcers, and nervous breakdowns it would seem to be desirable. Perhaps the fact that the ethic of the schools is incompatible with that of many segments of society is at the root of the general diminishing interest children have in school and the alarming rate of those who do not find school either relevant or rewarding.

We have a long way to go in identifying those values the school is obligated to impart and those it should avoid imparting. Because of the diversity of cultures in this country, it would seem reasonable that the schools should adapt in such a manner as to expose children to a wide variety of value systems while refraining from imposing any of them. Before this can be done, many current teachers and administrators will need to be replaced by new, more flexible, educators. It is certainly imperative that something be done to retain the enthusiasm of children with respect to learning because those who drop out of school become parents of the next generation and it is the parents who provide children with their initial value orientations.

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APPENDIX A

Teacher's Name: _____ Grade: _____

RATING SCALES

This form is for the purpose of finding out how you, as a teacher who understands the pupils in your class, would rate each of the students listed with respect to several characteristics.

For each characteristic you are given a scale and a description. Try to consider each child in comparison with all other children in his or her age group. Please rate all children listed on one characteristic before going to the next. These scales are independent and it is very possible that a child will be high on some, low on some, and moderate on others.

Your rating is made simply by circling a number next to the child's name which shows the position in which you would place him on the scale.

I. Sociability:

Seeks out and enjoys the company of peers. Prefers groups to the companionship of only one friend.

----tries to be with a group of children----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID		Name	Rating (circle one)				
175	5	ALCIBIA JACE	1	2	3	4	5
149	5	ALVARADO LISA	1	2	3	4	5
176	5	ANDERSON TONI	1	2	3	4	5
150	5	BLACK ELIZABETH	1	2	3	4	5
177	5	CHAVEZ CYNTHIA	1	2	3	4	5
178	5	EVANS JUDI	1	2	3	4	5
179	5	FOWLER GARY	1	2	3	4	5
180	5	GONZALES ROBERT	1	2	3	4	5
181	5	HAMMOTO KAREN	1	2	3	4	5
151	5	HIGGINS ROBERT	1	2	3	4	5
152	5	HONDA LLOYD	1	2	3	4	5
182	5	KAGATA JAMES	1	2	3	4	5
134	5	KUNG MICHAEL	1	2	3	4	5
183	5	MATSUMOTO GARY	1	2	3	4	5
165	5	MORINO JUNE	1	2	3	4	5
153	5	MURRAY ADE	1	2	3	4	5
135	5	RICHARDS CARDI	1	2	3	4	5
136	5	RIVERA LUPE	1	2	3	4	5
166	5	SCOTT CYNTHIA	1	2	3	4	5
137	5	STEIN BEITCHEN	1	2	3	4	5
167	5	STUMER SUSAN	1	2	3	4	5
138	5	TORRES DELORES	1	2	3	4	5
139	5	WILSON ANTHONY	1	2	3	4	5
140	5	WRIGHT ANTHONY	1	2	3	4	5
161	5	YOSHITAKE STEVE	1	2	3	4	5

II. Health Habits:

Practices and shows
evidence of habits of
cleanliness and hygiene.

-----shows evidence of
cleanliness-----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	5 ALLEN JACK	1	2	3	4	5
149	5 ALVARADO LISA	1	2	3	4	5
176	5 ANDERSON TONI	1	2	3	4	5
150	5 BLACK ELIZABETH	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDI	1	2	3	4	5
179	5 FOWLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMAMOTO KAREN	1	2	3	4	5
151	5 HIGGINS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGATA JAMES	1	2	3	4	5
134	5 KONG MICHAEL	1	2	3	4	5
183	5 MATSUKATO GARY	1	2	3	4	5
165	5 MORINO JUNE	1	2	3	4	5
153	5 MURRAY ANN	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN GRETCHEN	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
141	5 YOSHIMURA STEVE	1	2	3	4	5

III. Academic Motivation:

Participates with enthusiasm in activities related to learning. Displays interest in learning.

----participates enthusiastically in learning activities----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID		Name	Rating (circle one)				
175	5	ALCIBIA JERK	1	2	3	4	5
149	5	ALVA ADI ELISA	1	2	3	4	5
176	5	ANDERSON TONI	1	2	3	4	5
150	5	BLACK ELIZABETH	1	2	3	4	5
177	5	CHAVEZ CYNTHIA	1	2	3	4	5
178	5	EVANS JUDI	1	2	3	4	5
179	5	FOWLER GARY	1	2	3	4	5
180	5	GONZALES JOHNNY	1	2	3	4	5
181	5	HAMAZOTO KAREN	1	2	3	4	5
151	5	HIGGINS ROBERT	1	2	3	4	5
152	5	HONDA LLOYD	1	2	3	4	5
182	5	KAGAWA JAMES	1	2	3	4	5
134	5	KONG MICHAEL	1	2	3	4	5
183	5	MATSUMOTO GARY	1	2	3	4	5
165	5	MORINO JUNE	1	2	3	4	5
153	5	MURRAY ARI	1	2	3	4	5
135	5	RICHARDS GARD	1	2	3	4	5
136	5	RIVERA LUIS	1	2	3	4	5
166	5	SCOTT CYNTHIA	1	2	3	4	5
137	5	STEIN SEPTIMON	1	2	3	4	5
167	5	STEVENS SUSAN	1	2	3	4	5
138	5	TORRES DELORES	1	2	3	4	5
139	5	WILSON ANTHONY	1	2	3	4	5
140	5	WRIGHT ANTHONY	1	2	3	4	5
141	5	YOSHIMURA STEVE	1	2	3	4	5

IV. Closeness to Adults:

Seeks close physical relationships with adults; physically affectionate.

----tries to get physically close to adults----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	5 ALLEN JIM	1	2	3	4	5
149	5 ALVARADO LISA	1	2	3	4	5
176	5 ANDERSON JOHN	1	2	3	4	5
150	5 BLACK ELIZABETH	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDITH	1	2	3	4	5
179	5 FOWLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMMERTON KAREN	1	2	3	4	5
151	5 JENNINGS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGAWA JAMES	1	2	3	4	5
154	5 KING MICHAEL	1	2	3	4	5
183	5 MATSUOKA GARY	1	2	3	4	5
165	5 MORRIS JUDITH	1	2	3	4	5
153	5 MURRAY ANN	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN SETH	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
161	5 YOSHIMURA STEVEN	1	2	3	4	5

V. Asocial Behavior

Is amused by the discomfort of others. Enjoys seeing others upset, or property defaced or damaged. Breaks rules of society.

----approves of (or does) asocial acts----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
135	ALBERT J. FOL	1	2	3	4	5
140	ALVA ADRIANA	1	2	3	4	5
176	ANDERSON JOHN	1	2	3	4	5
150	BLACK ELIZABETH	1	2	3	4	5
177	CHAVEZ CYNTHIA	1	2	3	4	5
178	EVANS JUDITH	1	2	3	4	5
179	FOWLER GARY	1	2	3	4	5
180	GONZALES ROBERT	1	2	3	4	5
181	HARAYOTO KAREN	1	2	3	4	5
151	HIGGINS ROBERT	1	2	3	4	5
152	HONDA LLOYD	1	2	3	4	5
182	KAGAN JAMES	1	2	3	4	5
134	KONG MICHAEL	1	2	3	4	5
183	MATSUMOTO GARY	1	2	3	4	5
165	MORINO JUDITH	1	2	3	4	5
153	MURRAY ALAN	1	2	3	4	5
135	RICHARDS GARDEN	1	2	3	4	5
136	RIVERA LUCY	1	2	3	4	5
166	SCOTT CYNTHIA	1	2	3	4	5
137	STEIN GEFILCHEN	1	2	3	4	5
167	STEWART SUSAN	1	2	3	4	5
138	TORRES DELACOS	1	2	3	4	5
139	WILSON WILLIAM	1	2	3	4	5
140	WRIGHT ARTHUR	1	2	3	4	5
141	YOSHIMURA STEVEN	1	2	3	4	5

VI. Aesthetics:

Seeks out sensory experiences (seeing, hearing, smelling, touching).

----eager to attend to sensory stimuli----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	5 ALBERT JON	1	2	3	4	5
149	5 ALVARADO LISA	1	2	3	4	5
176	5 ANDERSON TONI	1	2	3	4	5
150	5 BLACK ELIZABETH	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDITH	1	2	3	4	5
179	5 FOWLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMAMOTO KAREN	1	2	3	4	5
151	5 HIGGINS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGAWA JAMES	1	2	3	4	5
134	5 KONG MICHAEL	1	2	3	4	5
183	5 MATSUOKA GARY	1	2	3	4	5
165	5 MORINO JUNE	1	2	3	4	5
153	5 MURRAY ANNE	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN GERTCHEN	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
141	5 YOSHIMURA STEVE	1	2	3	4	5

VII. Social Conformity:

Behaves in such a manner as to conform to the expectations of adults. Doing what one should do. Being responsible.

----does what he (she) should do----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID		Name	Rating (circle one)				
175	5	ALBERT JACK	1	2	3	4	5
149	5	ALVARADO LISA	1	2	3	4	5
176	5	ANDERSON TONI	1	2	3	4	5
150	5	BLACK ELIZABETH	1	2	3	4	5
177	5	CHAVEZ CYNTHIA	1	2	3	4	5
178	5	EVANS JUDI	1	2	3	4	5
179	5	FOWLER GARY	1	2	3	4	5
180	5	GONZALES ROBERT	1	2	3	4	5
181	5	HAMAMOTO KAREN	1	2	3	4	5
151	5	HIGGINS ROBERT	1	2	3	4	5
152	5	HONDA LLOYD	1	2	3	4	5
182	5	KAGAWA JAMES	1	2	3	4	5
134	5	KONG MICHAEL	1	2	3	4	5
183	5	MATSUMOTO GARY	1	2	3	4	5
165	5	MORINO JUNE	1	2	3	4	5
153	5	MURRAY ANNE	1	2	3	4	5
135	5	RICHARDS CAROL	1	2	3	4	5
136	5	RIVERA LUPE	1	2	3	4	5
166	5	SCOTT CYNTHIA	1	2	3	4	5
137	5	STEIN GRETCHEN	1	2	3	4	5
167	5	STEVENS SUSAN	1	2	3	4	5
138	5	TORRES DELORES	1	2	3	4	5
139	5	WILSON ANTHONY	1	2	3	4	5
140	5	WRIGHT ARTHUR	1	2	3	4	5
141	5	YOSHIMURA STEVE	1	2	3	4	5

VIII. Masculinity --
Femininity:

Is interested in things
typical of his (her) sex.

1. Very masculine
2. Somewhat masculine
3. Has mixed interests
4. Somewhat feminine
5. Very feminine

ID		Name	Rating (circle one)				
175	5	ALLISON JACK	1	2	3	4	5
149	5	ALVARADO LISA	1	2	3	4	5
176	5	ANDERSON EDIE	1	2	3	4	5
150	5	BLACK ELIZABETH	1	2	3	4	5
177	5	CHAVEZ CYNTHIA	1	2	3	4	5
178	5	EVANS JUDIE	1	2	3	4	5
179	5	FOWLER GARY	1	2	3	4	5
180	5	GONZALES ROBERT	1	2	3	4	5
181	5	HAMAMOTO KAREN	1	2	3	4	5
151	5	HIGGINS ROBERT	1	2	3	4	5
152	5	HONDA LLOYD	1	2	3	4	5
182	5	KAGAWA JAMES	1	2	3	4	5
134	5	KUNG MICHAEL	1	2	3	4	5
183	5	MATSUMOTO GARY	1	2	3	4	5
165	5	MORINO JUNE	1	2	3	4	5
153	5	MURRAY ANNE	1	2	3	4	5
135	5	RICHARDS CAROL	1	2	3	4	5
136	5	RIVERA LUPE	1	2	3	4	5
166	5	SCOTT CYNTHIA	1	2	3	4	5
137	5	STEIN GRETCHEN	1	2	3	4	5
167	5	STEVENS SUSAN	1	2	3	4	5
138	5	TORRES DEBORAH	1	2	3	4	5
139	5	WILSON ANTHONY	1	2	3	4	5
140	5	WRIGHT ANTHONY	1	2	3	4	5
141	5	YOSHIDA STEVEN	1	2	3	4	5

IX. "Me First":

Behaves in such a manner
as to get what he (she) wants.
Seeks the active and/or
dominant position. Prefers
not to share.

----behaves in a domin-
ant manner----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	5 ALBERT JACK	1	2	3	4	5
149	5 ALVARADO ELISA	1	2	3	4	5
176	5 ANDERSON TONI	1	2	3	4	5
150	5 BLACK ELIZABETH	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDI	1	2	3	4	5
179	5 FOWLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMAMOTO KAREN	1	2	3	4	5
151	5 JIGGINS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGAWA JAMES	1	2	3	4	5
134	5 KONG MICHAEL	1	2	3	4	5
183	5 MATSUMOTO GARY	1	2	3	4	5
165	5 MORINO JUNE	1	2	3	4	5
153	5 MURRAY ANNE	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN GERTCHEN	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
141	5 YOSHIMURA STEVE	1	2	3	4	5

X. Academic Ability:

The potential the child has for learning as evidenced by intelligence test scores and/or general response to learning tasks.

----potential for learning----

1. Unusually high
2. Higher than average
3. Average
4. Lower than average
5. Low

ID	Name	Rating (circle one)				
175	5 ALLEN J. JACK	1	2	3	4	5
149	5 ALVA LADY LISA	1	2	3	4	5
176	5 ANDERSON JONI	1	2	3	4	5
150	5 BLACKBURN LUCY	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDY	1	2	3	4	5
179	5 FOLLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMPTON SARAH	1	2	3	4	5
151	5 HIGGINS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGATA JAMES	1	2	3	4	5
134	5 KING MICHAEL	1	2	3	4	5
183	5 MATSUOKA GARY	1	2	3	4	5
165	5 MORINO JUNE	1	2	3	4	5
153	5 MURRAY ANNE	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN GRETCHEN	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
141	5 YOSHIMURA STEVEN	1	2	3	4	5

XI. Classroom Behavior:

Extent to which the child exhibits behavior which indicates lack of adjustment to the classroom (talks out of turn, plays when he (she) should be working, disrupts others, fails to pay attention etc.)

-----creates problems by classroom behavior-----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	ALLEGRI JOSE	1	2	3	4	5
149	ALVARADO LISA	1	2	3	4	5
176	ANDERSON JOHN	1	2	3	4	5
150	BLACK BILLAGER	1	2	3	4	5
177	CHAVEZ CYNTHIA	1	2	3	4	5
178	EVANS JUDY	1	2	3	4	5
179	FOLLEY GARY	1	2	3	4	5
180	GONZALES ROBERT	1	2	3	4	5
181	HAMMILL RALPH	1	2	3	4	5
151	HIGGINS ROBERT	1	2	3	4	5
152	HONDA LLOYD	1	2	3	4	5
182	KAGATA JAMES	1	2	3	4	5
134	KING MICHAEL	1	2	3	4	5
183	MATSUKOTO GARY	1	2	3	4	5
165	MORINO JUNE	1	2	3	4	5
153	MURRAY ALAN	1	2	3	4	5
135	RICHARDS CAROL	1	2	3	4	5
136	RIVERA LUCY	1	2	3	4	5
166	SCOTT CYNTHIA	1	2	3	4	5
137	STEIN GERTHEN	1	2	3	4	5
167	STEVENS SUSAN	1	2	3	4	5
138	TORRES DELBERT	1	2	3	4	5
139	WILSON ARTHUR	1	2	3	4	5
140	WRIGHT ARTHUR	1	2	3	4	5
141	YOSHIDA STEVE	1	2	3	4	5

XII. Peer Relations:

Extent to which the child gets along with and is liked by other children in class.

----works and plays well with other children----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID	Name	Rating (circle one)				
175	5 ALLEN JON	1	2	3	4	5
149	5 ALVARADO LISA	1	2	3	4	5
176	5 ANDERSON JONI	1	2	3	4	5
150	5 BLACK HILABETH	1	2	3	4	5
177	5 CHAVEZ CYNTHIA	1	2	3	4	5
178	5 EVANS JUDI	1	2	3	4	5
179	5 FOWLER GARY	1	2	3	4	5
180	5 GONZALES ROBERT	1	2	3	4	5
181	5 HAMMATH KAREN	1	2	3	4	5
151	5 HIGGINS ROBERT	1	2	3	4	5
152	5 HONDA LLOYD	1	2	3	4	5
182	5 KAGATA JAMES	1	2	3	4	5
134	5 KONG MICHAEL	1	2	3	4	5
183	5 MATSUGOTO GARY	1	2	3	4	5
165	5 MORINO JUNE	1	2	3	4	5
153	5 MURRAY ALI	1	2	3	4	5
135	5 RICHARDS CAROL	1	2	3	4	5
136	5 RIVERA LUPE	1	2	3	4	5
166	5 SCOTT CYNTHIA	1	2	3	4	5
137	5 STEIN GEFUCHEN	1	2	3	4	5
167	5 STEVENS SUSAN	1	2	3	4	5
138	5 TORRES DELORES	1	2	3	4	5
139	5 WILSON ANTHONY	1	2	3	4	5
140	5 WRIGHT ARTHUR	1	2	3	4	5
141	5 YOSHIMURA STEVE	1	2	3	4	5

XIII. Summary Evaluations:

How satisfied are you,
as a teacher, with all
aspects of the child --
academic, social, and
personal?

----an enjoyable child
to have in class----

1. Usually
2. Frequently
3. Sometimes
4. Seldom
5. Rarely

ID		Name	Rating (circle one)				
175	5	ALLISON JACK	1	2	3	4	5
149	5	ALVARADO LISA	1	2	3	4	5
176	5	ANDERSON TONI	1	2	3	4	5
150	5	BLACK ELIZABETH	1	2	3	4	5
177	5	CHAVEZ CYNTHIA	1	2	3	4	5
178	5	EVANS JUDI	1	2	3	4	5
179	5	FOWLER GARY	1	2	3	4	5
180	5	GONZALES ROBERT	1	2	3	4	5
181	5	HAMAMOTO KAREN	1	2	3	4	5
151	5	HIGGINS ROBERT	1	2	3	4	5
152	5	HONDA LLOYD	1	2	3	4	5
182	5	KAGATA JAMES	1	2	3	4	5
134	5	KONG MICHAEL	1	2	3	4	5
183	5	MATSUMOTO GARY	1	2	3	4	5
165	5	MORINO JUNE	1	2	3	4	5
153	5	MURRAY ANNE	1	2	3	4	5
135	5	RICHARDS CAROL	1	2	3	4	5
136	5	RIVERA LUPE	1	2	3	4	5
166	5	SCOTT CYNTHIA	1	2	3	4	5
137	5	STEIN GRETCHEN	1	2	3	4	5
167	5	STEVENS SUSAN	1	2	3	4	5
138	5	TORRES DELORES	1	2	3	4	5
139	5	WILSON ANTHONY	1	2	3	4	5
140	5	WRIGHT ARTHUR	1	2	3	4	5
141	5	YOSHIMURA STEVEN	1	2	3	4	5

XIV. Dimensions of Values in Children:

You and your students have been helping in the development of the Values Inventory for Children. You have provided us with ratings of a number of children in your class who have been with you for the past year. The first nine scales covered the dimensions we have already discovered in analyzing this test. We recognize, however, that not all these dimensions of value are equally important to you, as a teacher, in understanding your students. When we revise the instrument we will want to add items to those dimensions which are of greatest importance to teachers.

The purpose of the scale below is to find out how important each dimensions is to you. Please place a "1" next to the most important dimension, a "2" beside the next most important, etc. until you have ranked all dimensions. If two dimensions are equally important, give them the same rank, then give the next most important, the rank number which follows. For example, if two dimensions rank number "1," the third will rank "2." If a dimension is not important at all, place a "0" in the space next to it. If you have forgotten the definitions, glance back at the rating scales you have completed.

	Dimension	Rank
I.	Sociability	_____
II.	Health Habits	_____
III.	Academic Motivation	_____
IV.	Closeness to Adults	_____
V.	Asocial Behavior	_____
VI.	Aesthetic	_____
VII.	Social Conformity	_____
VIII.	Masculinity-Femininity	_____
IX.	"Me First"	_____

APPENDIX B

RATING SCALE

This form is for the purpose of finding out how you, as a teacher, view the importance of various dimensions of children's values. These dimensions have been found in the testing of more than 1300 elementary school children. Each one will have some value in helping teachers to understand children better. Not all of them will have equal importance. On the attached page is a scale you may use to rank-order the dimensions defined below. You will be helping immeasurably in the development of the Values Inventory for Children. Thank you.

- I. Sociability: Seeks out and enjoys the company of peers. Prefers groups to the companionship of only one friend.
- II. Health Habits: Practices and shows evidence of habits of cleanliness and hygiene.
- III. Academic Motivation: Participates with enthusiasm in activities related to learning. Displays interest in learning.
- IV. Closeness to Adults: Seeks close physical relationships with adults; physically affectionate.
- V. Asocial Behavior: Is amused by the discomfort of others. Enjoys seeing others upset, or property defaced or damaged.
- VI. Aesthetic: Seeks out sensory experiences (seeing, hearing, smelling, touching).
- VII. Social Conformity: Behaves in such a manner as to conform to the expectations of adults. Doing what one should do. Being responsible.
- VIII. Masculinity-Femininity: Is very interested in things typical of his (her) sex.
- IX. "Me First": Behaves in such a manner as to get what he (she) wants. Seeks the active and/or dominant position. Prefers not to share.

Instructions:

The purpose of the scale below is to find out how important each dimension is to you. Please place a "1" next to the most important dimension, a "2" beside the next most important, etc. If two dimensions are equally important, give them the same rank, then give the next most important the number which follows. For example, if two dimensions rank number "1," the third will rank "2." If a dimension is not important at all, place a "0" in the space next to it.

<u>Dimension</u>	<u>Rank</u>
I. Sociability	_____
II. Health Habits	_____
III. Academic Motivation	_____
IV. Closeness to Adults	_____
V. Asocial Behavior	_____
VI. Aesthetic	_____
VII. Social Conformity	_____
VIII. Masculinity-Femininity	_____
IX. "Me First"	_____

Teacher's Name _____ Grade _____

X



Name

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X



Name

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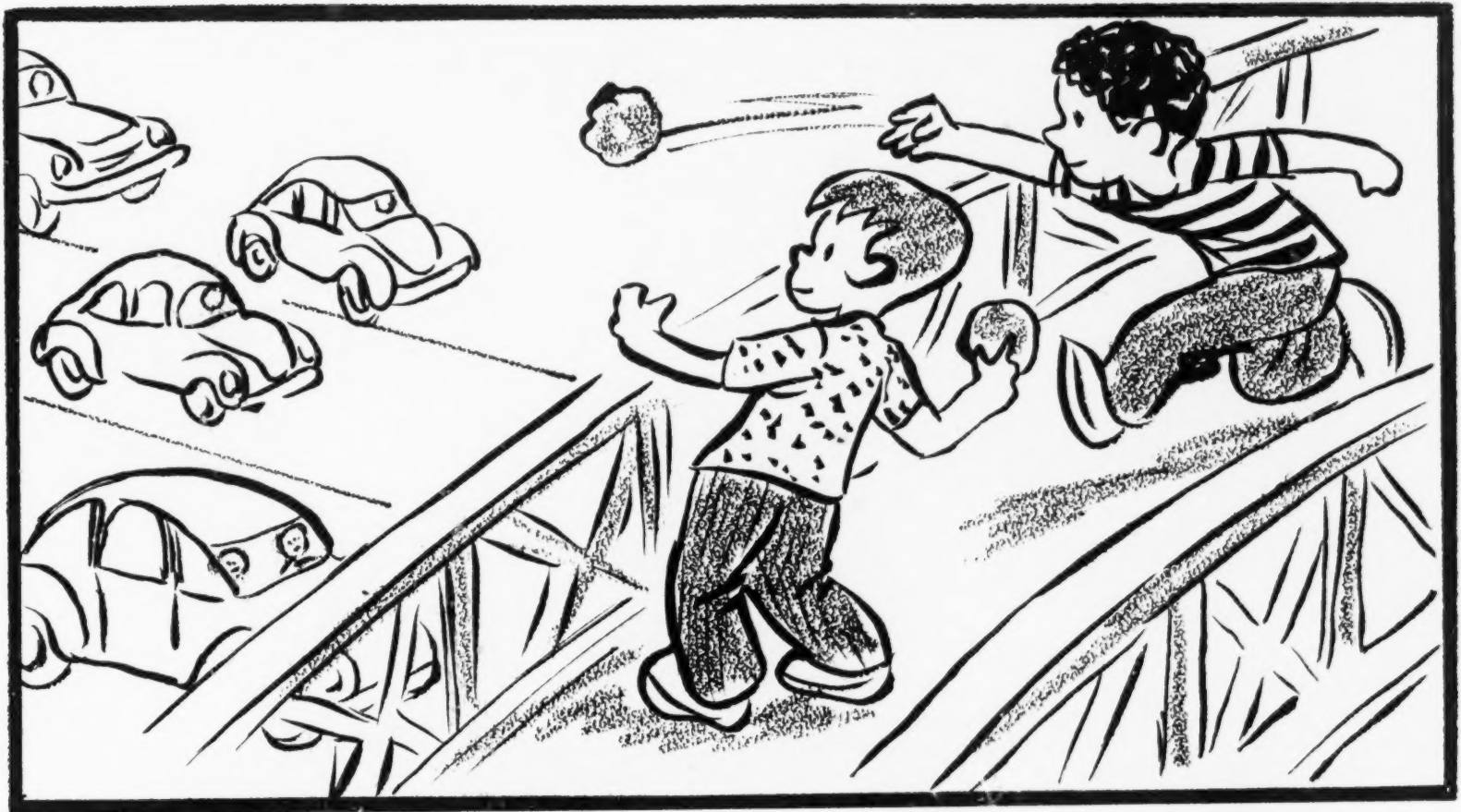


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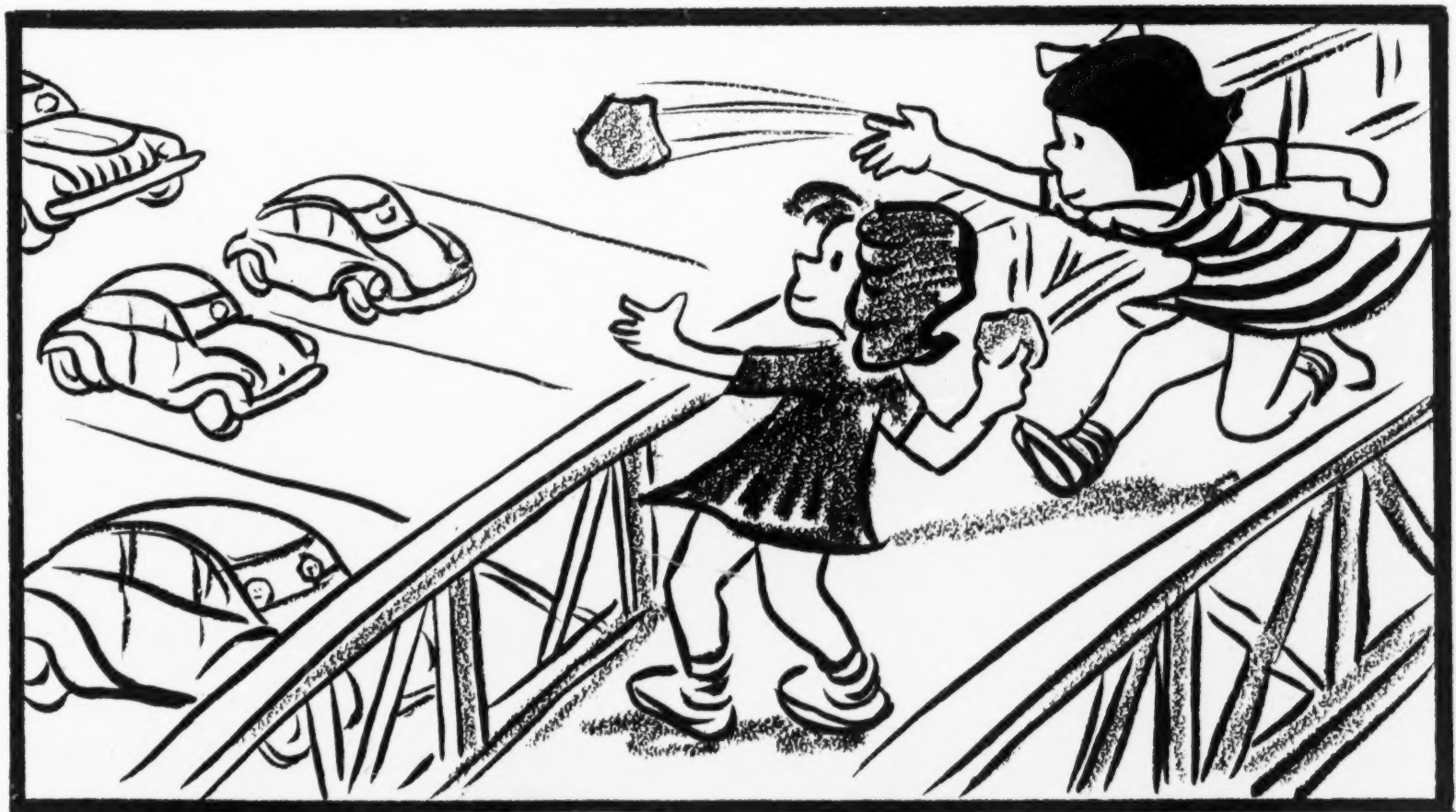


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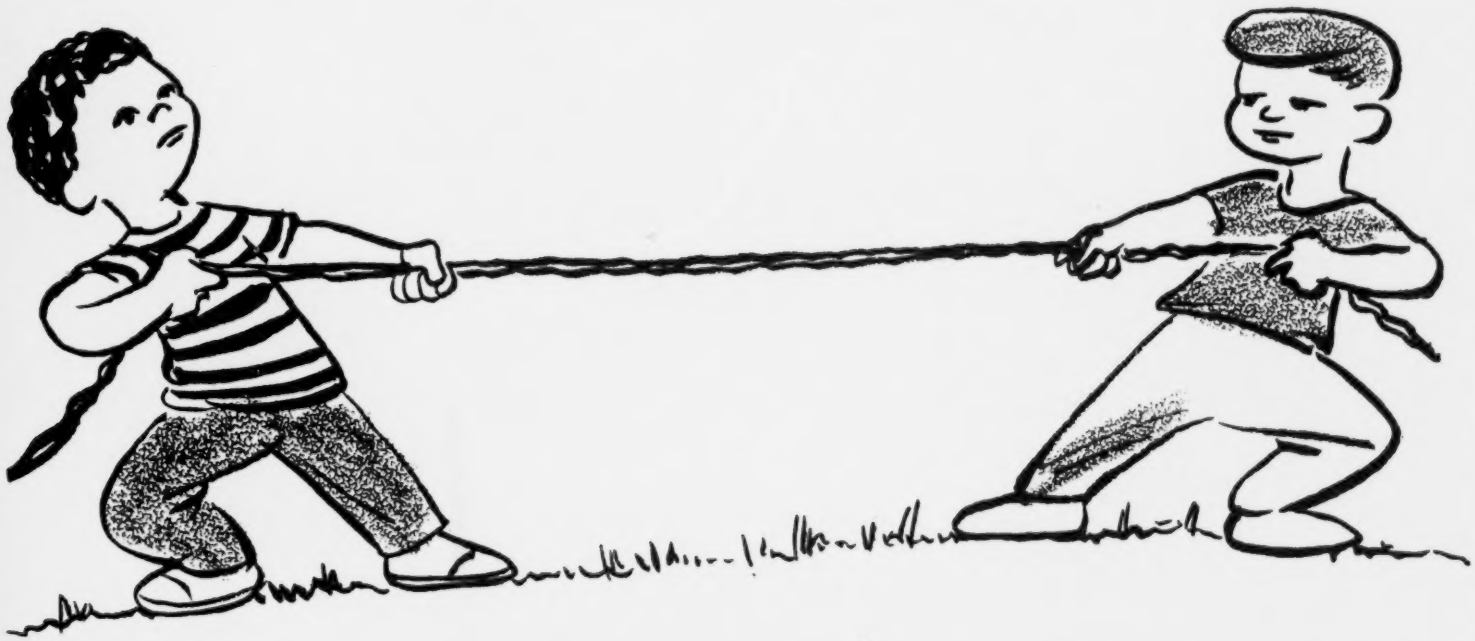
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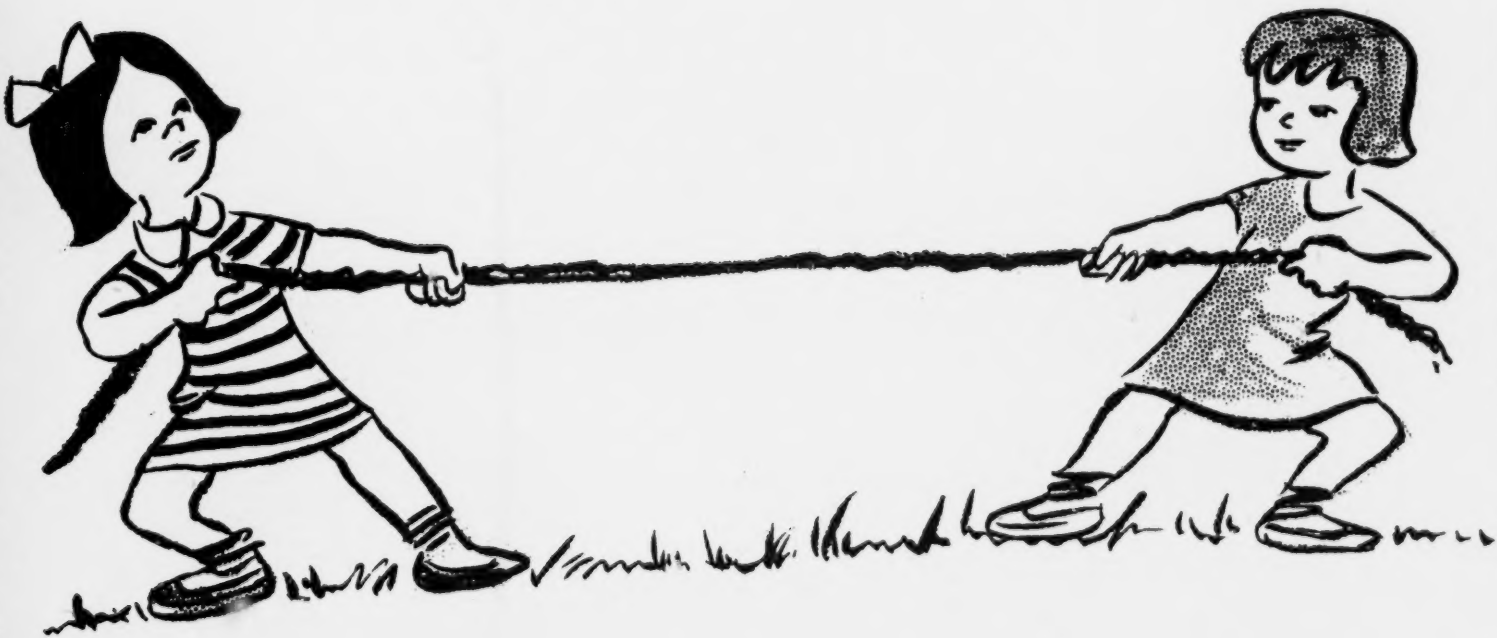
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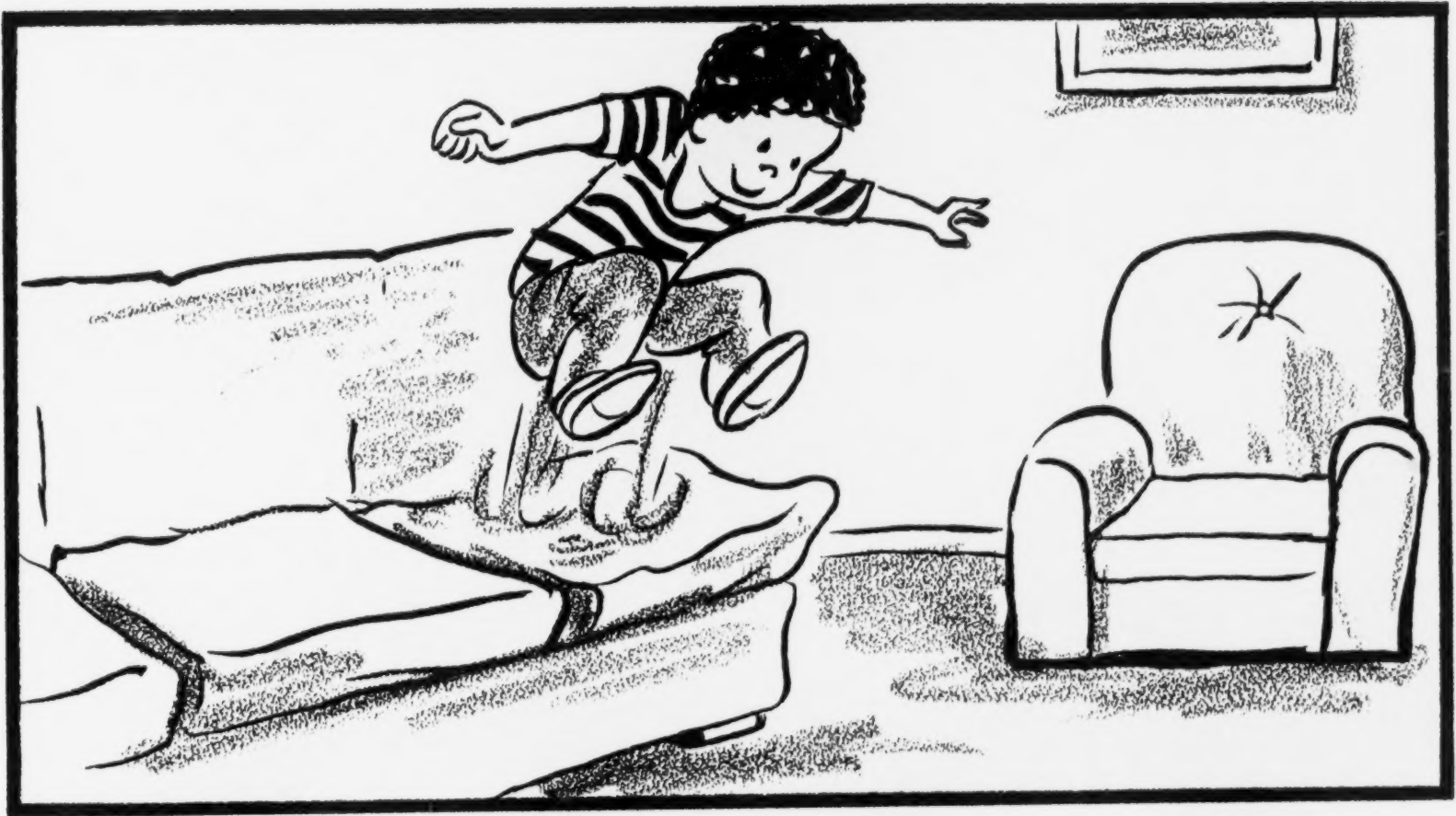


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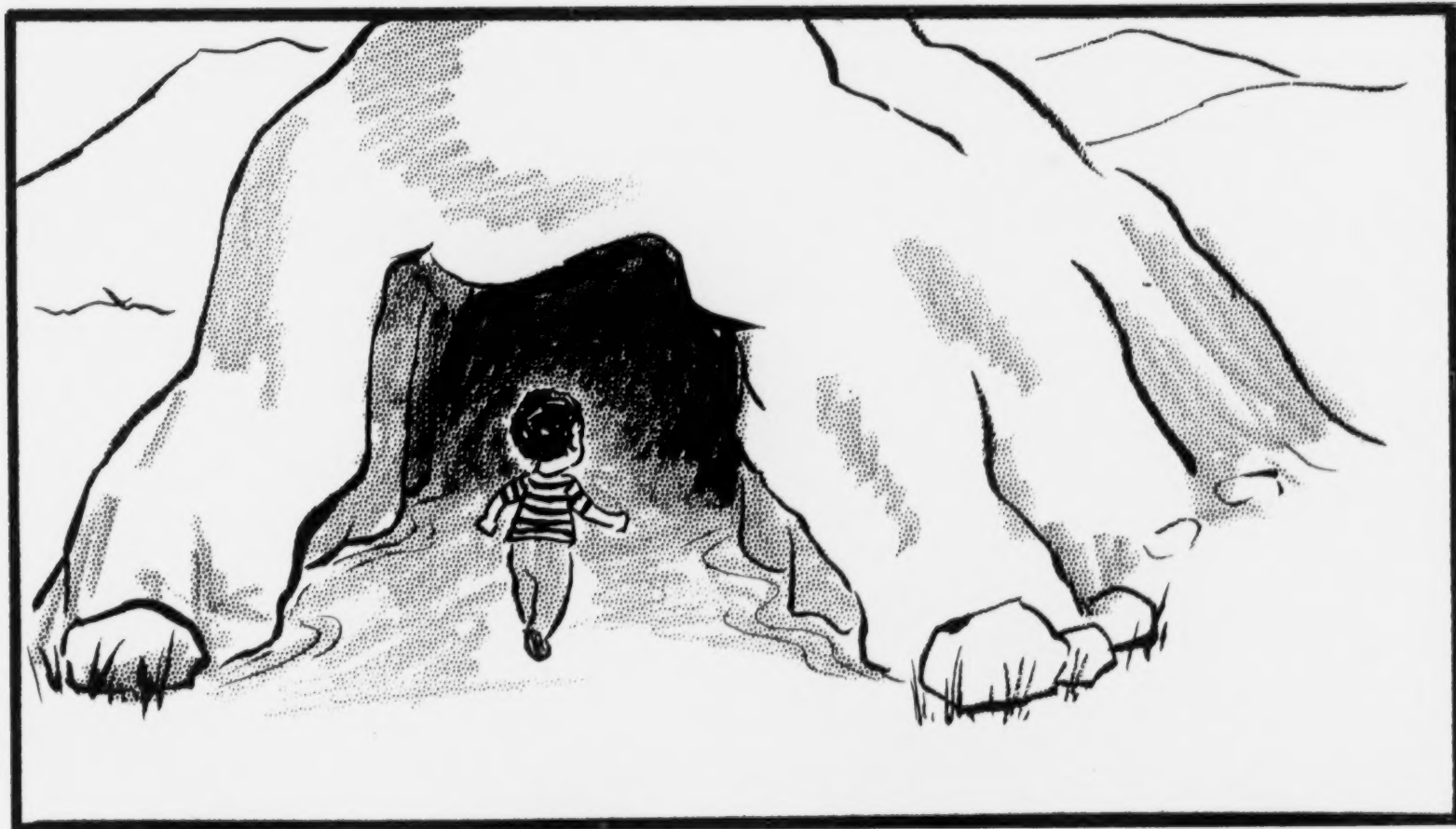


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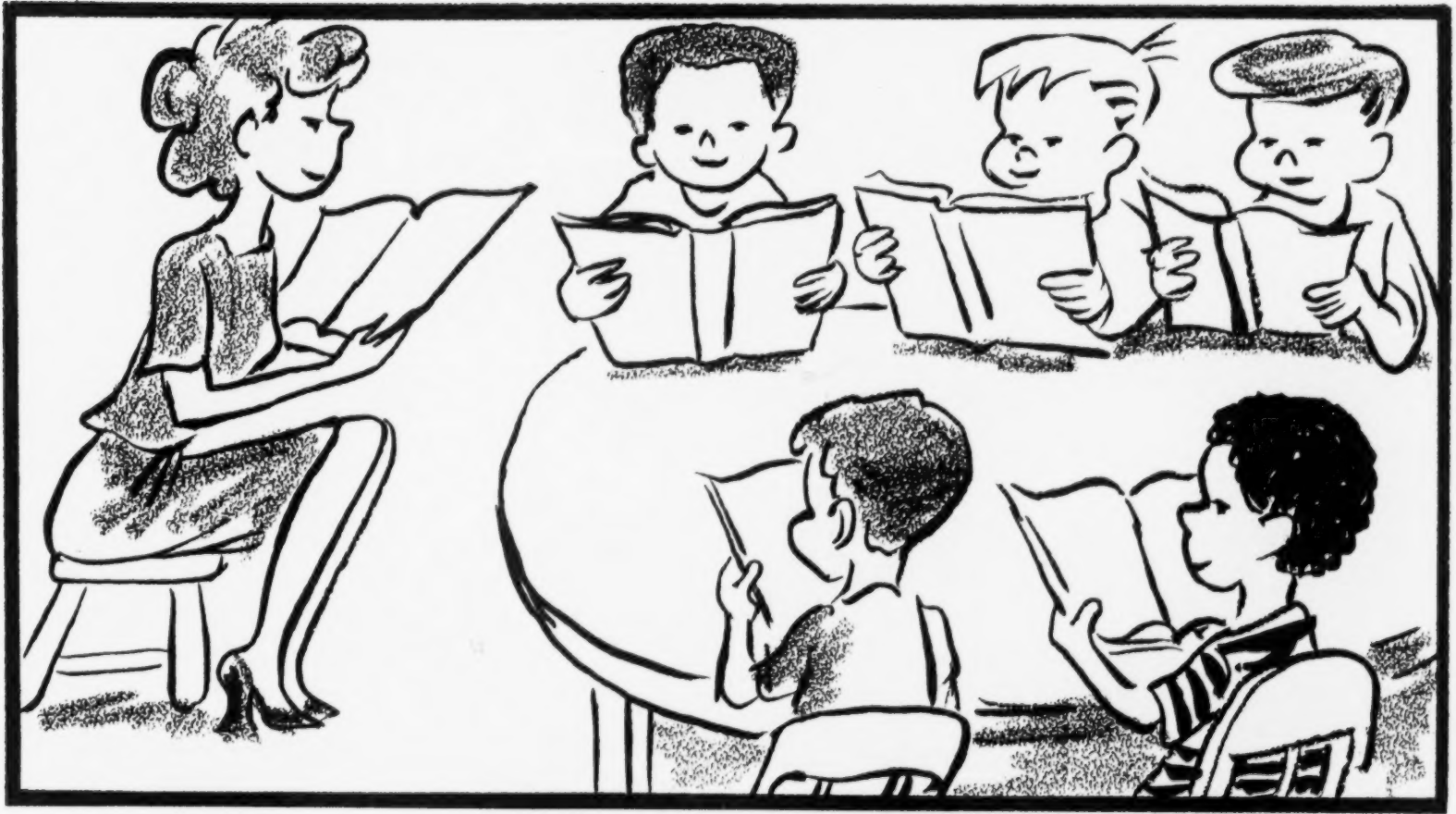


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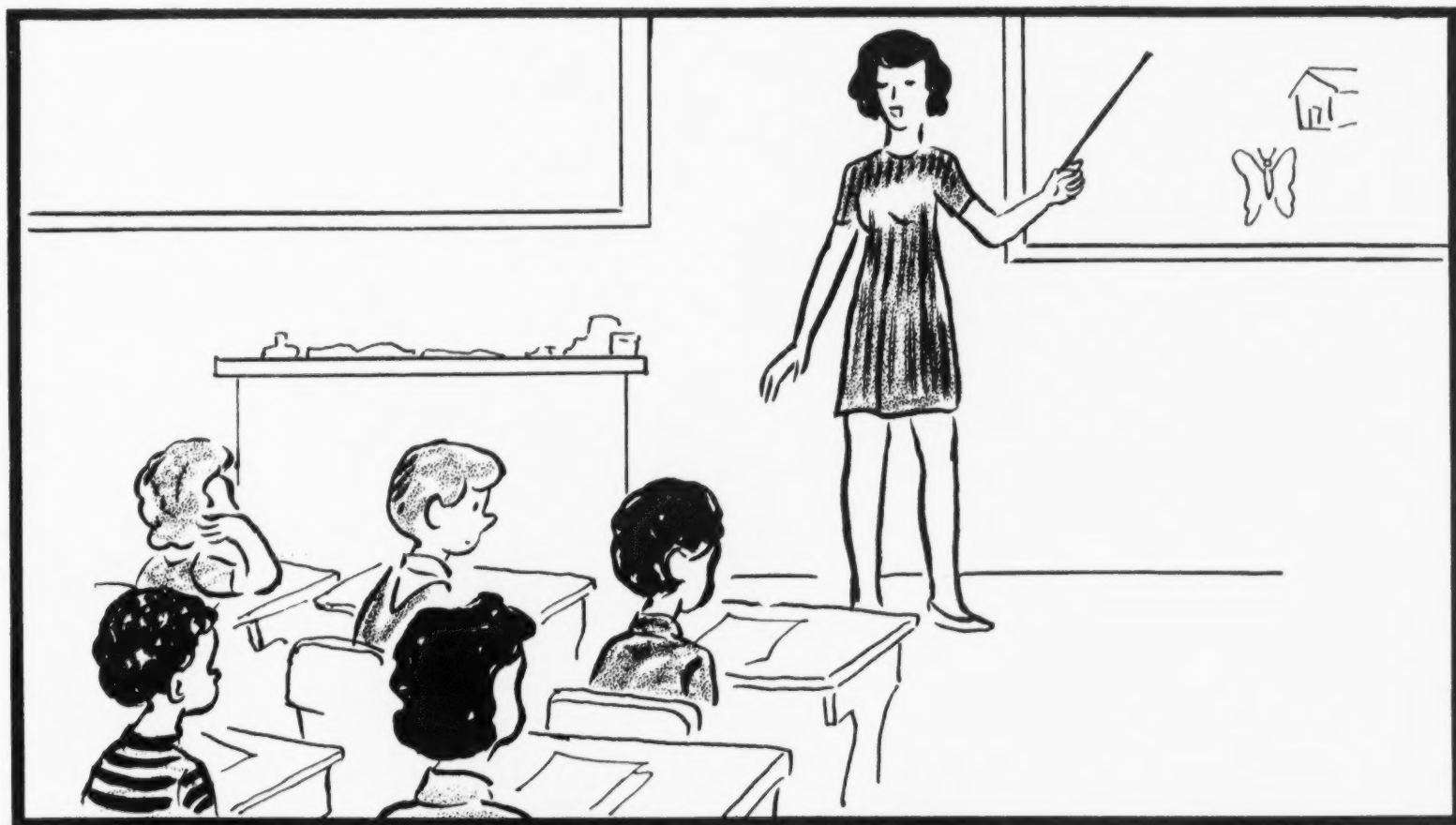


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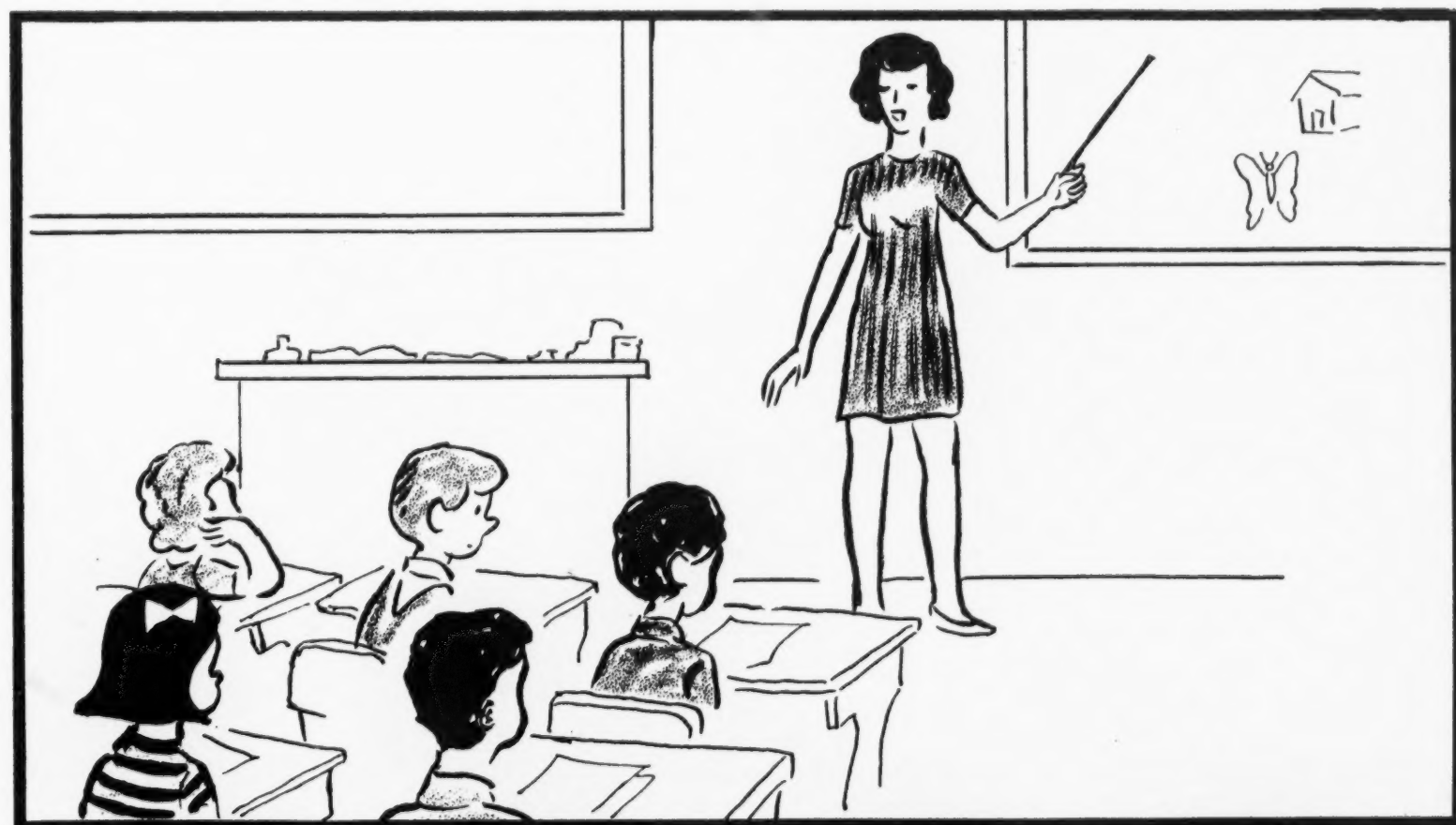


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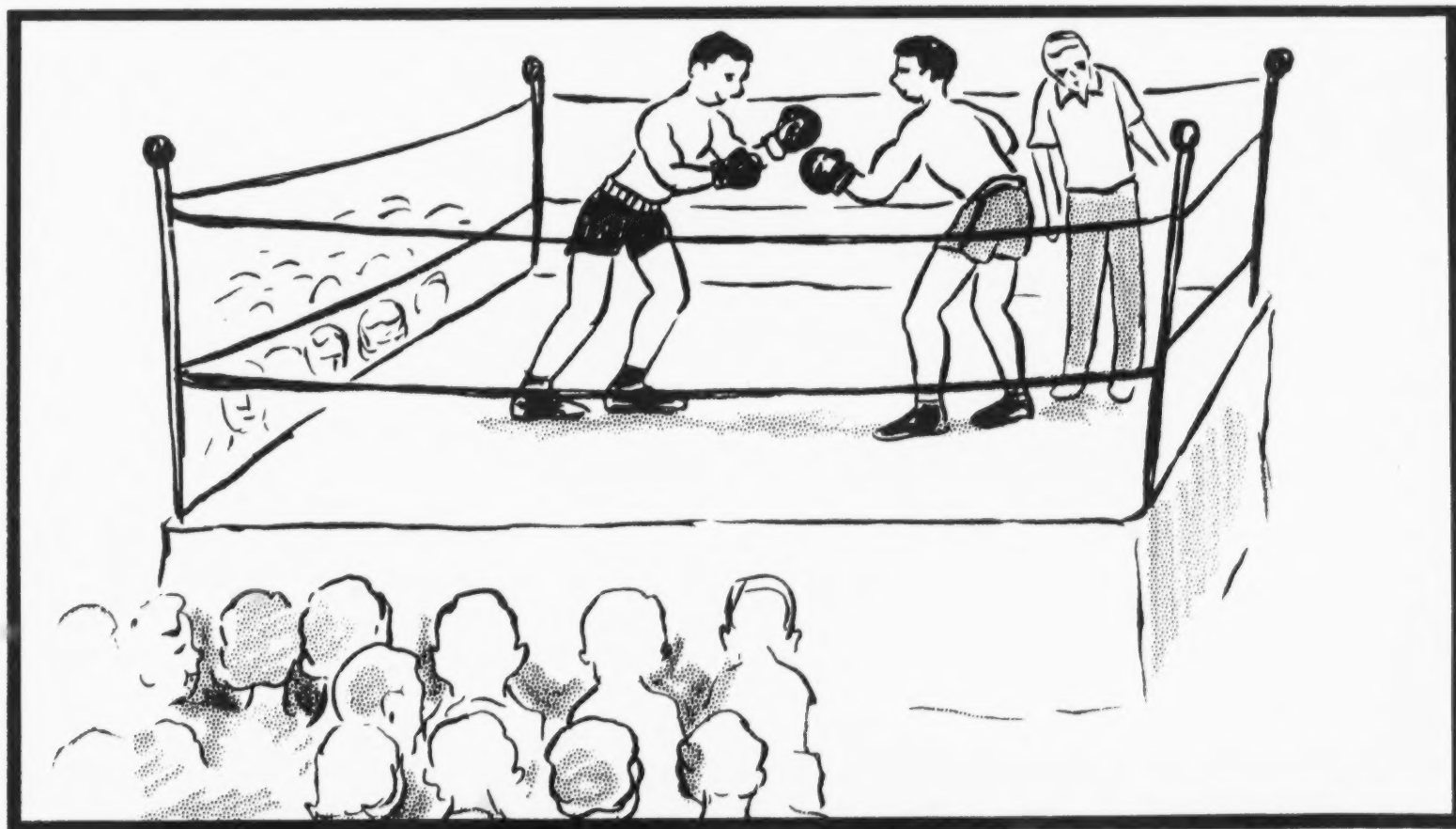
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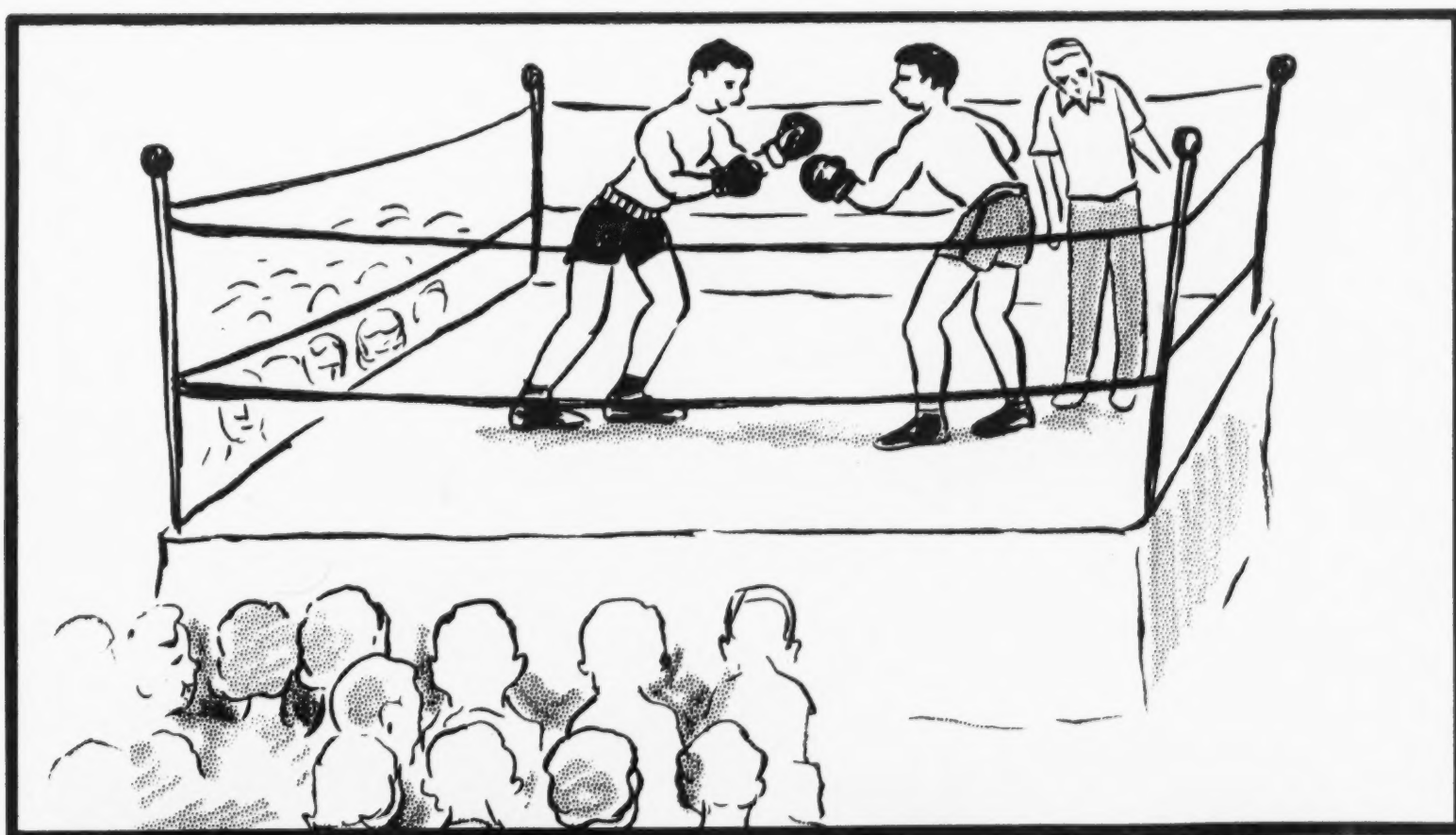
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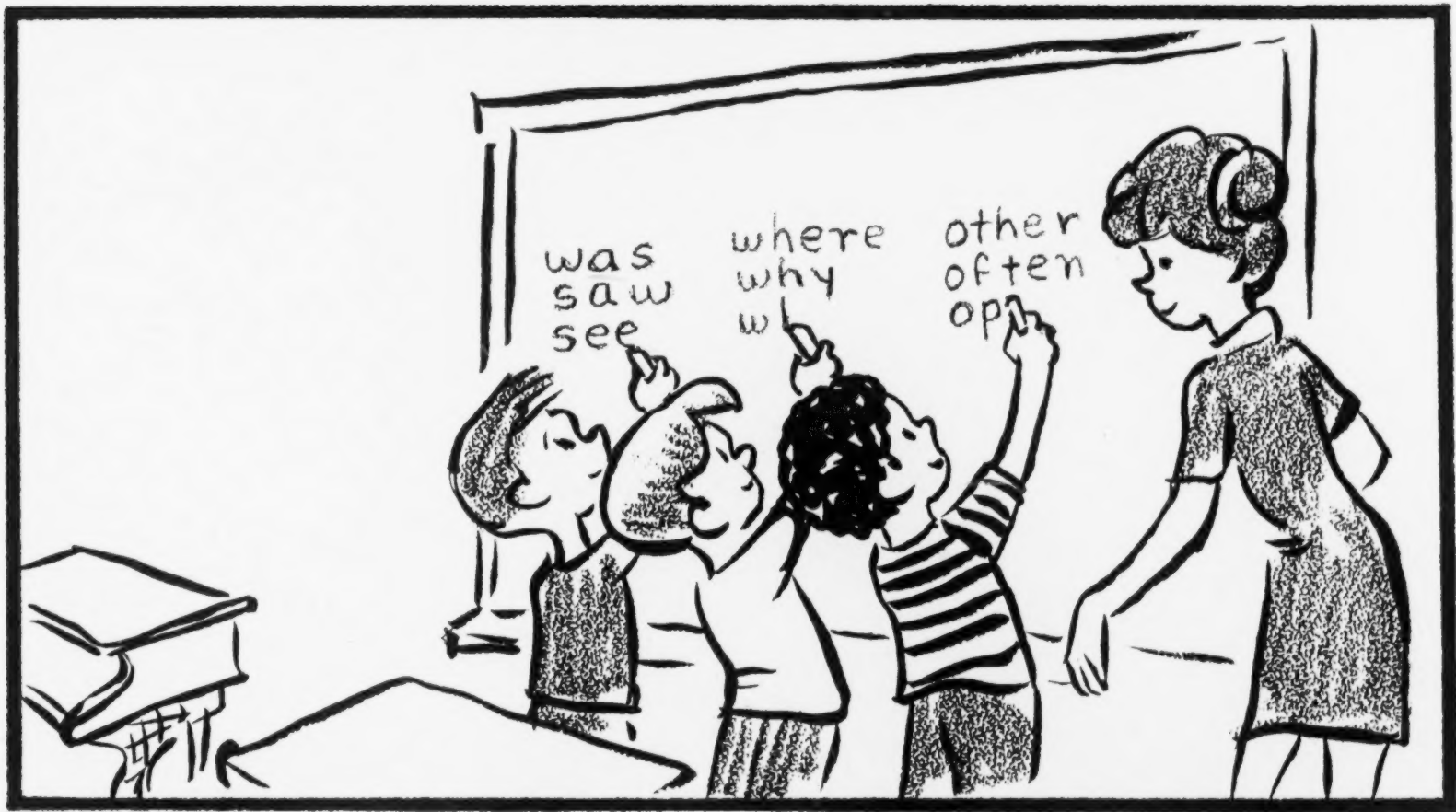
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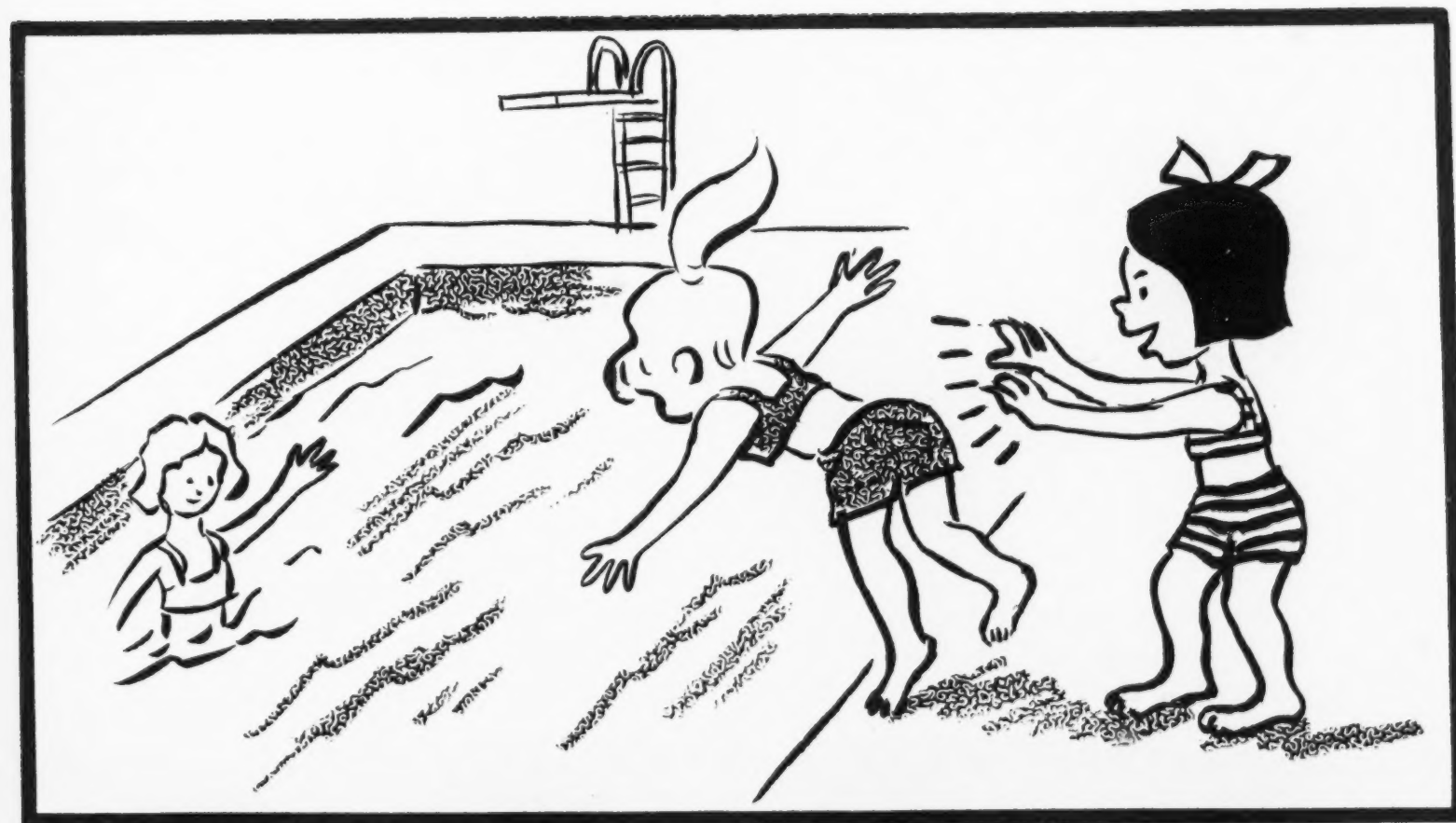
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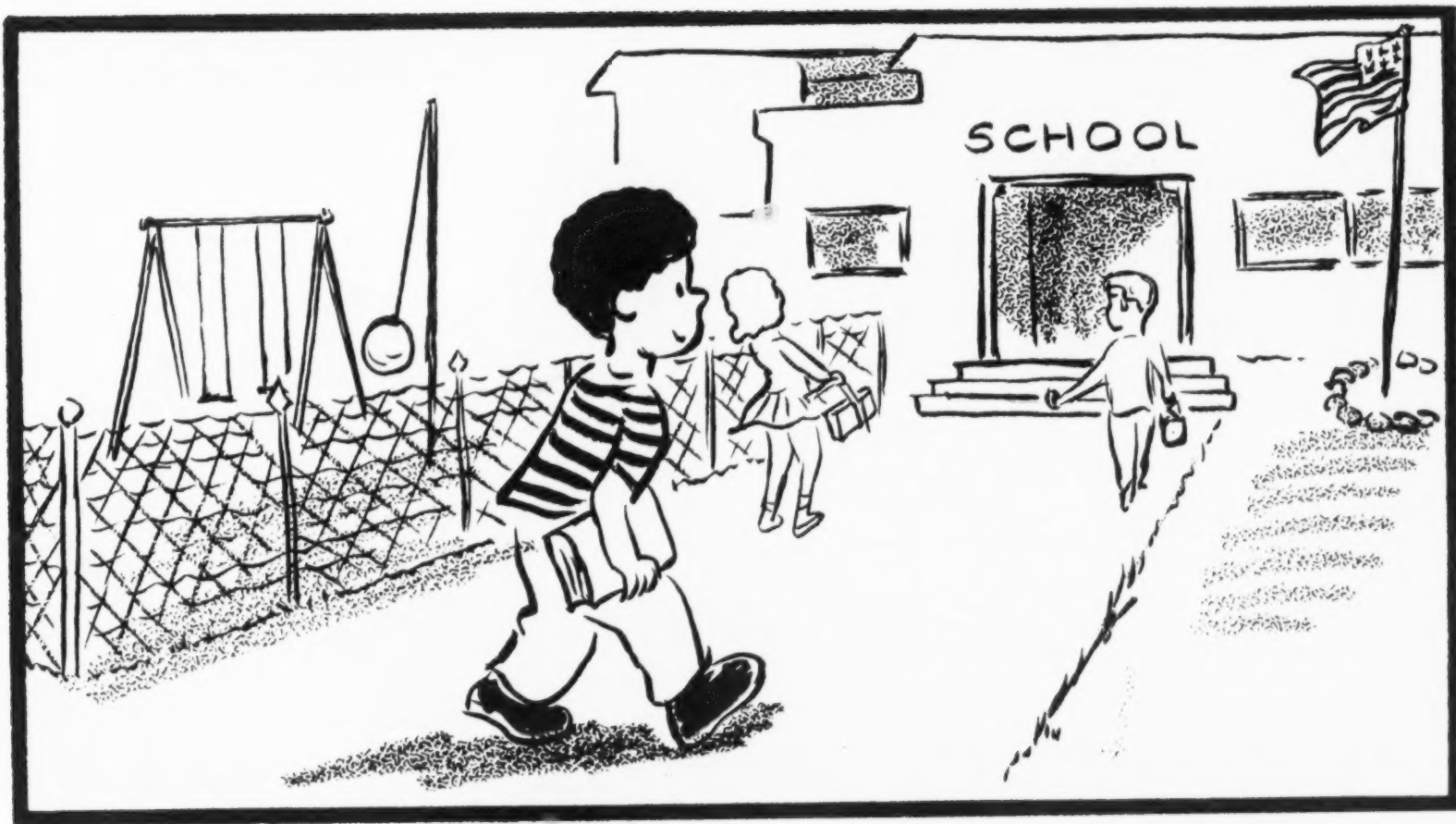
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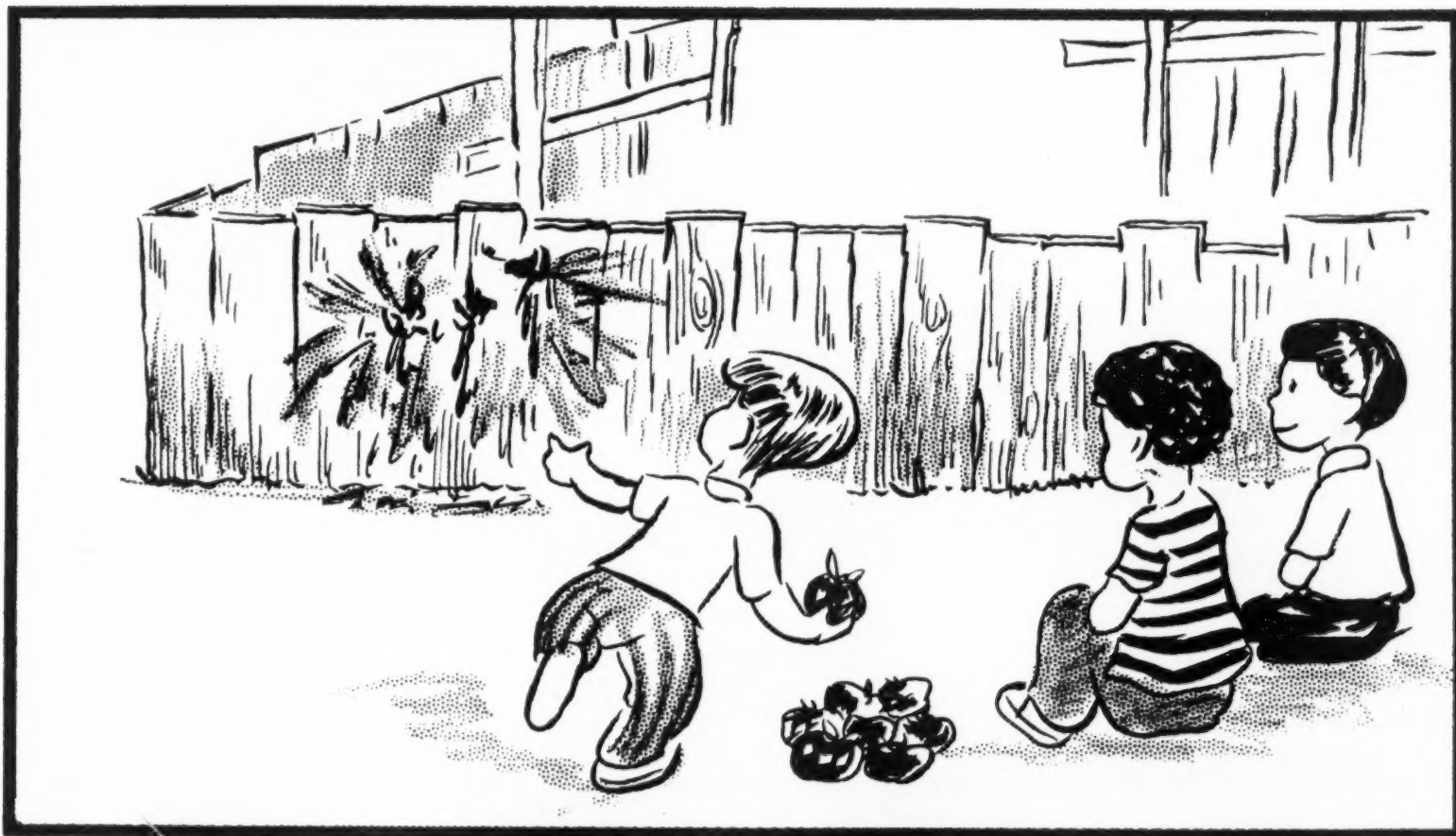


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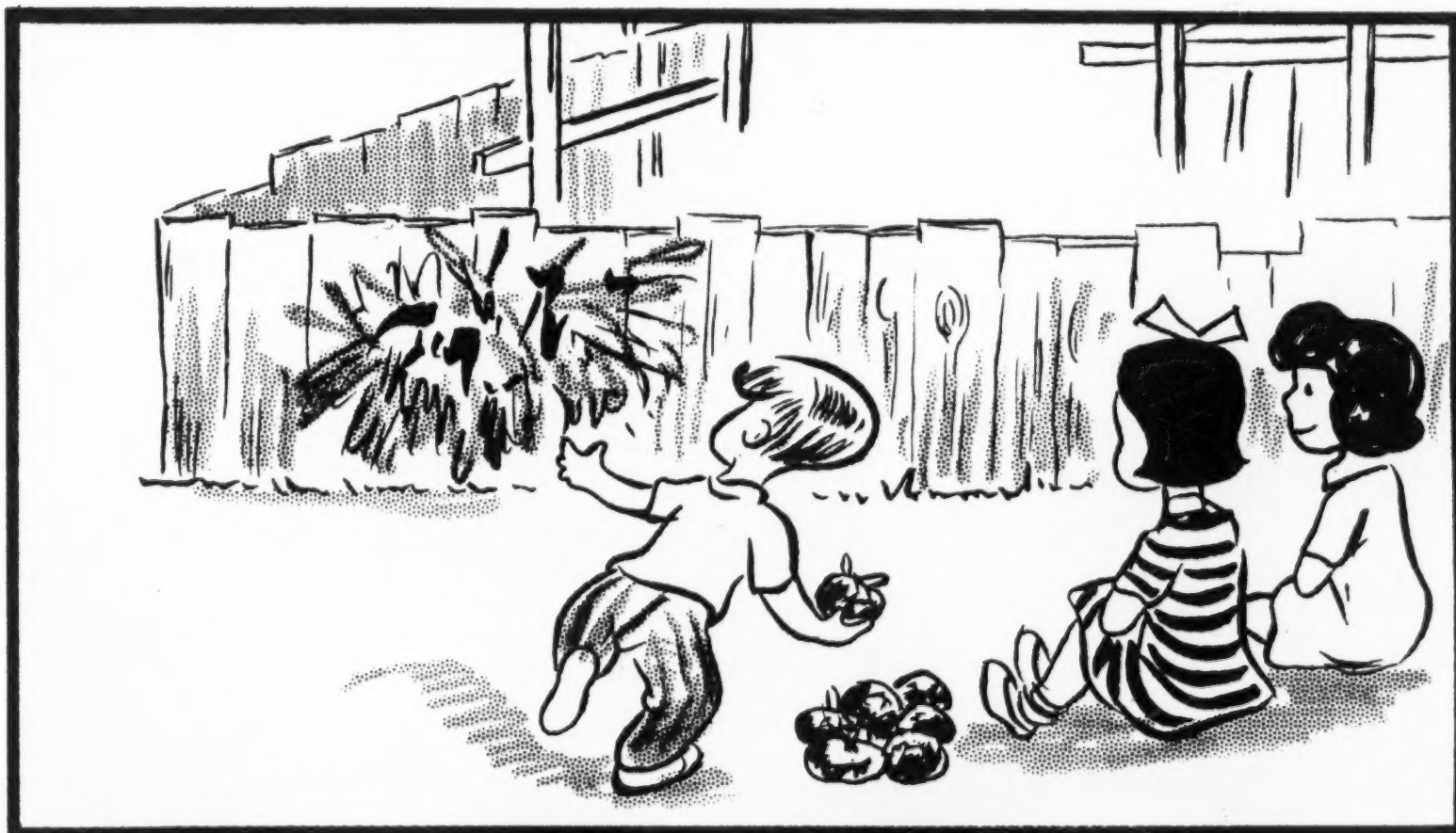


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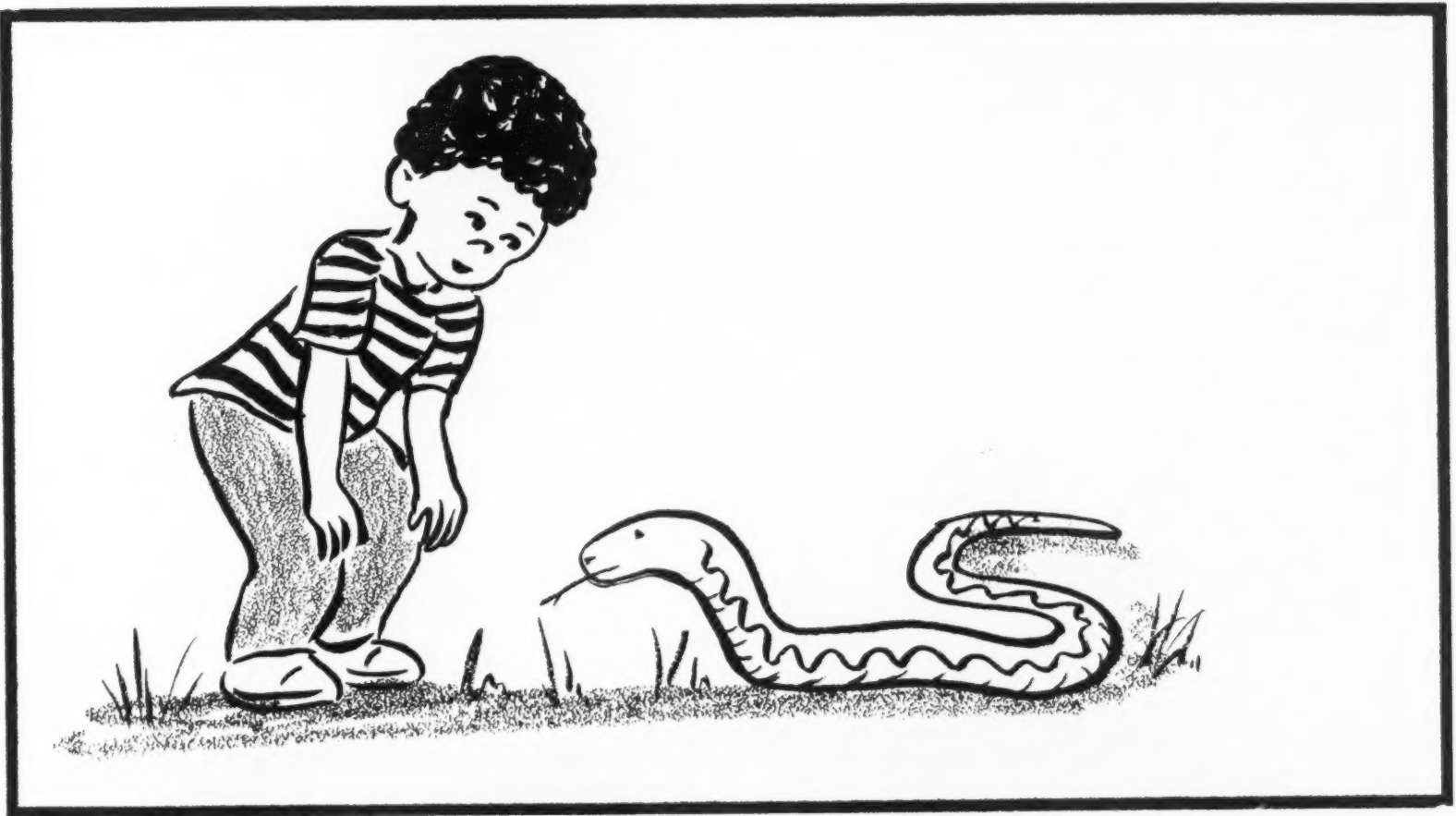
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Y



Name _____

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Y



Name _____

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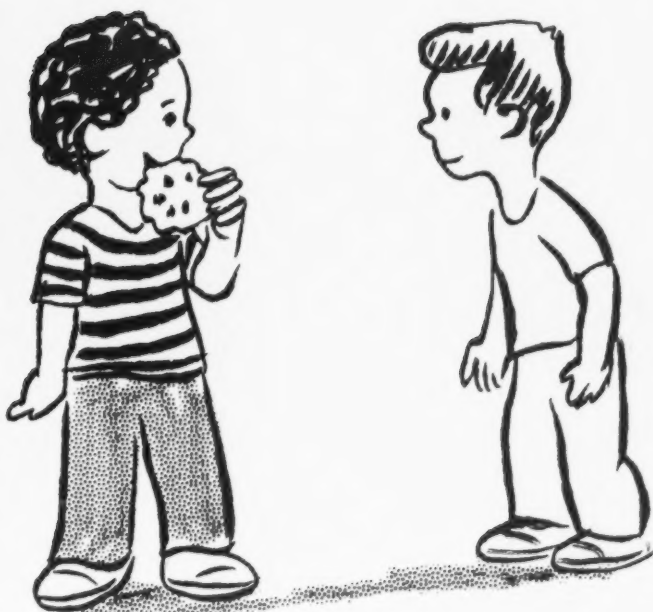
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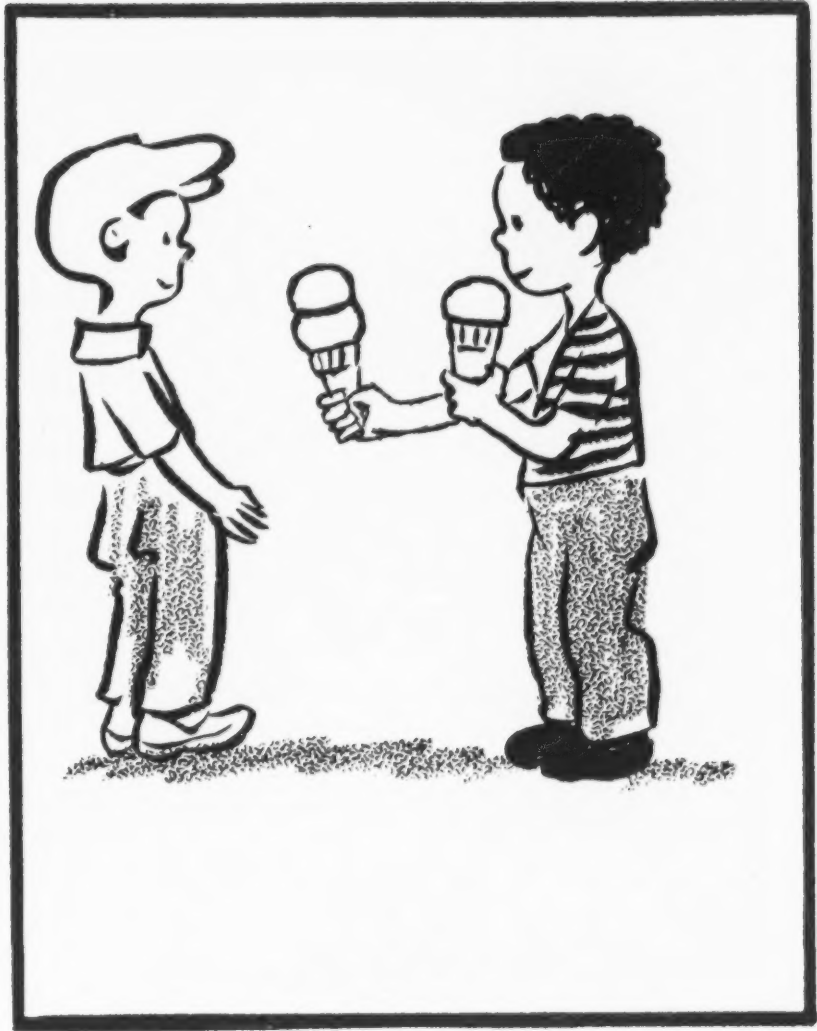
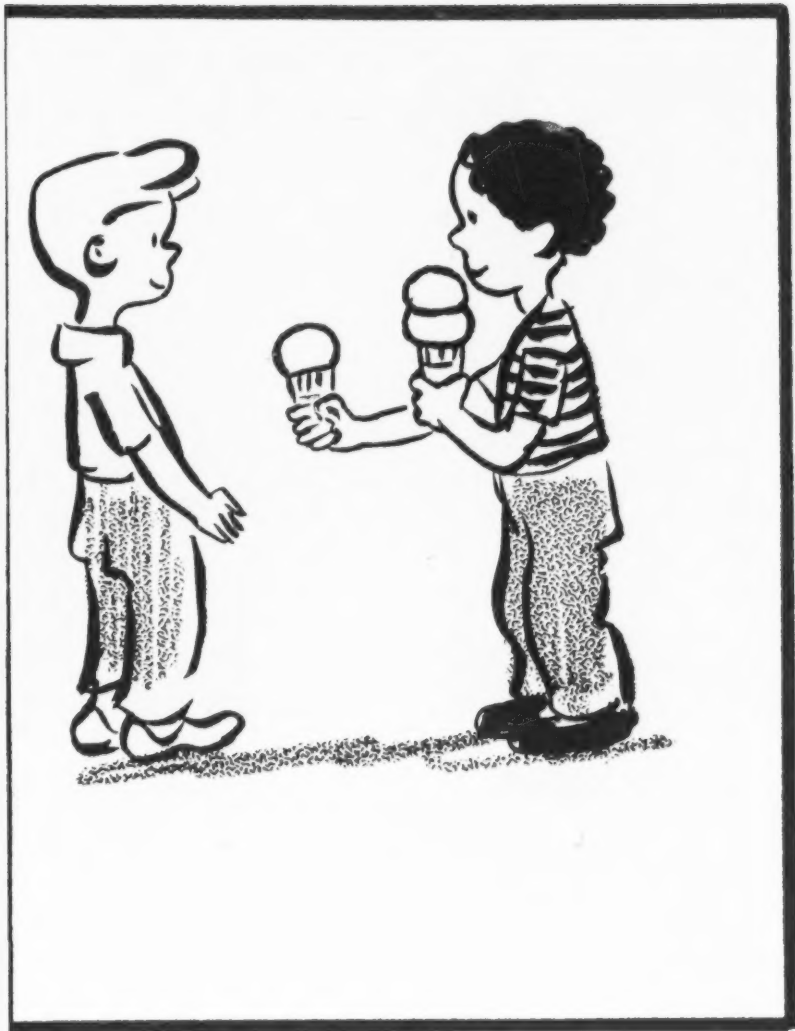


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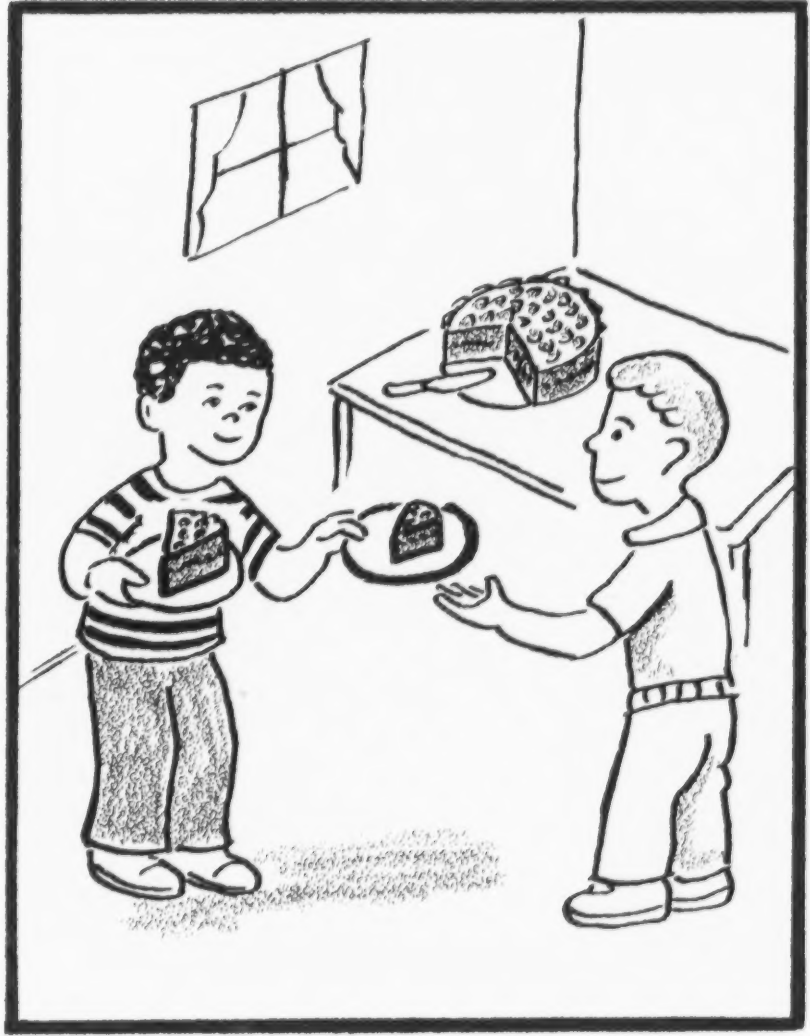




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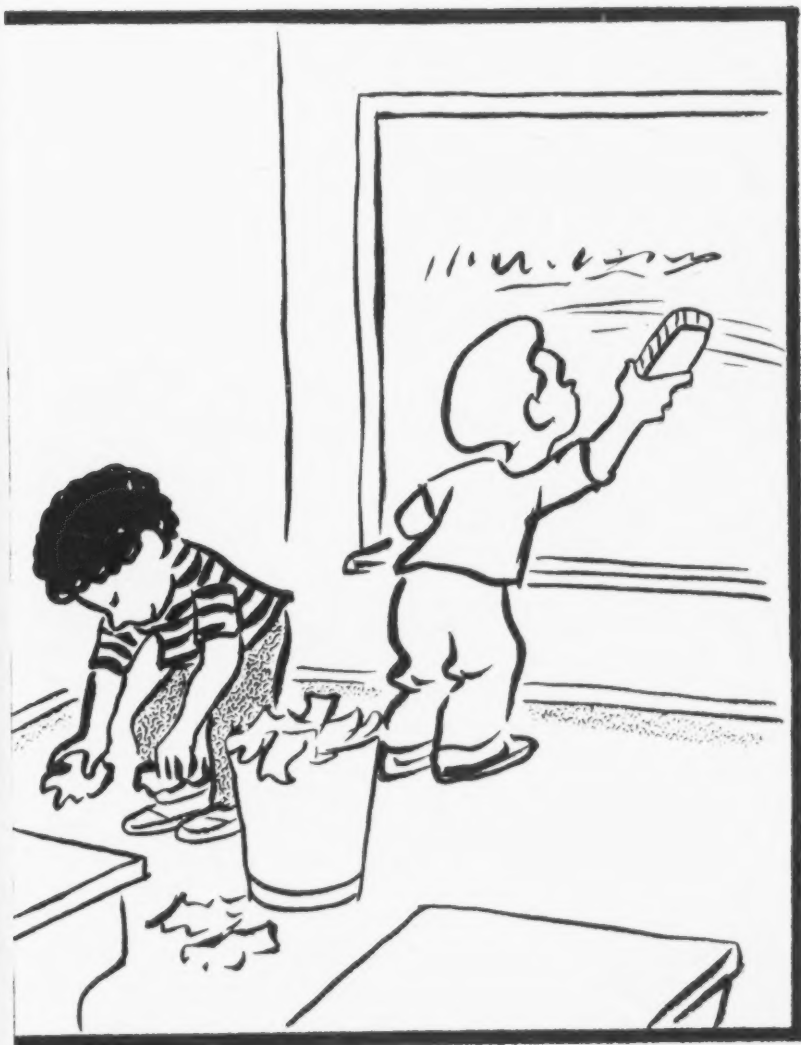


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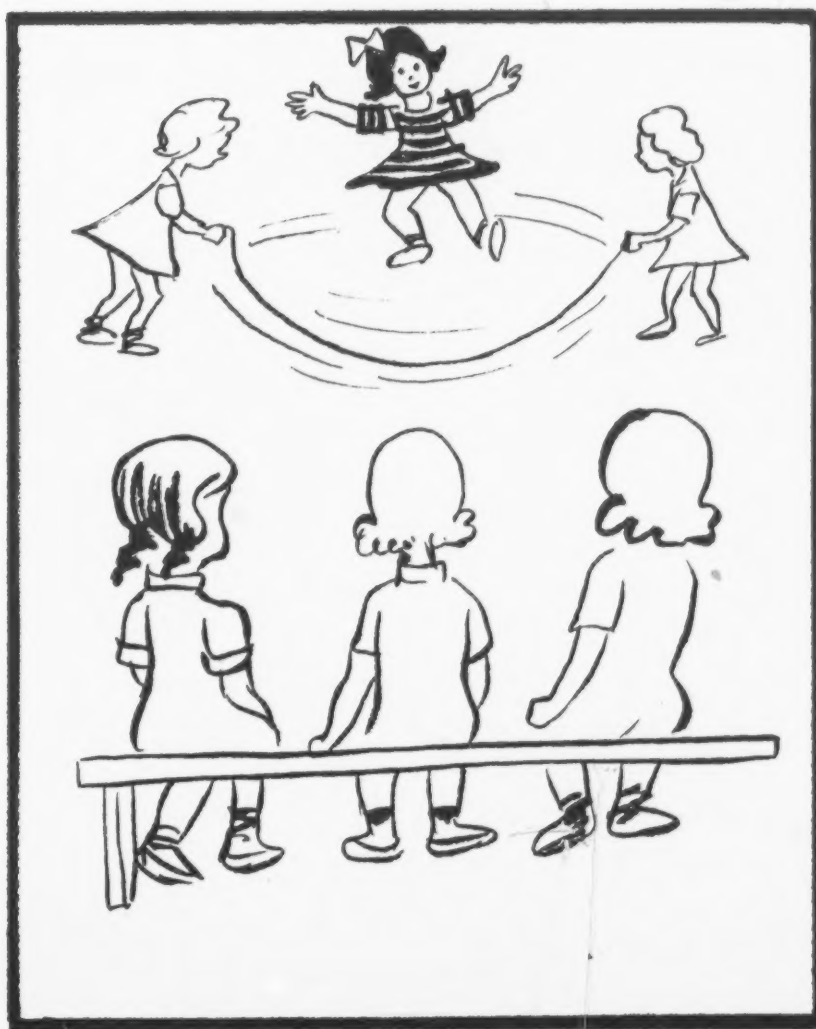


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APPENDIX D

Instructions for Administration of X and Y Booklets (Revised VIC)

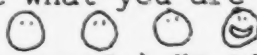
X Booklet

(Draw faces with no mouth on board)



(Hand out books) Please write your name at the bottom of the book. When you are finished put down your pencils and look up at me.

(Holding up book) See this person in the striped clothes. This is you. Whenever you see that person in the striped clothes doing something in your book, that will be you doing something. You tell how you feel about what you are doing by circling an answer face.

Look up here. If you like what you are doing in the picture you circle this face (draw large smile)  This face says, "I like what I am doing." Say it...(class responds) "I like what I'm doing."

If you don't like what you are doing, you circle this face  (draw frown) This face says, "I don't like what I'm doing." Say it...(class) "I don't like what I'm doing."

TURN THE PAGE (Hold up book - see that all children are on page i)

Here are the four answer faces. Take your pencil and make a circle around the face that says, "I like what I'm doing." like this (Demonstrate by drawing a circle around face with large smile). Say..."I like what I'm doing." (as children are circling the face)

Draw a circle around the face that says, "I don't like what I'm doing." (Demonstrate) Say..."I don't like what I'm doing."

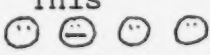
TURN THE PAGE (Hold up book)

There you are in your striped clothes eating ice cream and you like it very much. Circle the face that says, "I like what I'm doing very much." (recircle  face with large smile on board). "I like eating ice cream very much."

TURN PAGE (Hold up book)

You are falling down and going to hurt yourself. Circle the face that says, "I don't like what I'm doing." "I'm going to hurt myself and I don't like what I'm doing." (Recircle face with frown on board ).

TURN THE PAGE (Hold up book)

You are sitting there with nothing to do. You don't know how you feel. This is the face that says, "I don't know how I feel." (Draw straight line  on face). Say, "I don't know how I feel." (Wait for class response) Circle the face in your book and say, "I don't know how I feel."

TURN THE PAGE (Hold up book)

You are bouncing a ball. This is the face that says, "I like what I'm doing a little bit." (Draw slight smile ☹️ 😊 😊 😊). Say, "I like what I'm doing a little bit." (Wait for class response) Circle the face in your book and say, "I like what I'm doing a little bit."

Look up here and let's say the faces again. (Point) ☹️ This face says, "I don't like what I am doing." Say it...

(Point to face) ☹️ "I don't know how I feel." Say it...

(Point to face) 😊 "I like what I'm doing a little bit." Say it...

(Point to face) 😊 "I like what I'm doing very much." Say it...

(if proctor feels it is necessary - repeat "saying" the board faces, as above.)

TURN THE PAGE (Hold up book)

Find yourself in the striped clothes. Point to yourself. You are throwing rocks on the freeway and you could hurt someone or cause an accident. You don't like what you're doing. Circle the face that says, "I don't like what I'm doing."

TURN THE PAGE (Hold up book)

Point to yourself in the striped clothes. You are getting a present and you like that very much. Circle the face that says, "I like what I'm doing very much. I like getting presents."

You are in the striped clothes playing tug-of-war. Look up at me! (Explain) I don't know how you feel about playing tug of war. Some of you may like to and some of you may not. You circle the face that tells how you feel about it. If you like tug-of-war, circle this (Point to book) face. (Recircle ☹️ on board) If you don't like it, circle this (point to book) face (recircle ☹️ on board). The face that tells how you feel is the right face.

Now you finish the rest of the book by yourself. Turn the page, look for yourself in the striped clothes and then circle the face that tells how you feel about what you are doing.

(Put up dividers)

Y - BOOKLET

(Hold up book)

Look at the cover (pointing) This is you in the striped clothes.
Turn the page -

Look for the difference in the two pictures. It is raining and in one picture you don't have a raincoat and you will get wet. Point to yourself - without a raincoat (wait and check) in the other picture you have a raincoat on and you will stay dry. Point to yourself wearing a raincoat.

Draw a line under the picture you like best. I want to stay dry so I'll draw my line under this picture. (demonstrate) If you want to get wet draw a line under this picture (demonstrate without drawing line) Make sure your line is way down at the bottom of the page like this (point)

Finish the rest of the book by yourself. Look for yourself in the striped clothes. Look at both pictures -- find the difference and draw a line under the picture you like the best.

If you have any questions, raise your hand.

APPENDIX E
Instructions for Administration of the Original VIC. (60 items)

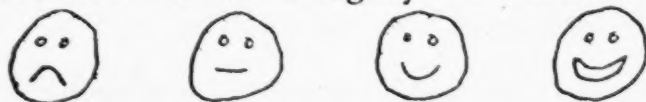
INSTRUCTIONS FOR "X" BOOKLET

For Use With Answer Sheet

You have a booklet and an answer sheet. Write only on the answer sheet.

Look at the top of the answer sheet. Find where it says: "name" and print your name. Write you age -- Write your birthday, month and day -- write your teacher's name -- your grade -- then circle "boy", if you are a boy, and "girl" if you are a girl.

Test administrator draws roughly on chalk board the four faces.



Look at the board. Here are four faces. Can you find the very happy face? Point to it. (E circles the face on the right.)

How do you know this is the very happy face? Yes, the big smile.

Can you find the very sad, unhappy face? Point to it. (E circles the face on the left.) How do you know this is the sad face? Yes, the mouth turns down.

Look at the cover of your book. This is you.

In this picture book you have a striped shirt or dress.

Turn the page and look at the four faces.

Now look at the answer sheet. You see the same four faces next to every picture.

When you like something you feel happy. Look for the very happy face. Now look at the answer sheet, at the first set of faces at the top, left of the page. On the answer sheet make a circle around the very happy face.

Don't turn the page.

When you don't like something you feel sad. Look for the unhappy and angry face. On the answer sheet, on that same first line, put a circle around the unhappy face.

TURN PAGE

Look at the big picture. You are eating your favorite ice cream. Find the same picture on the answer sheet. The very happy face in the booklet is in a box. Find the same face in your answer sheet and circle it. That face says "I like it very much."

TURN PAGE

You are falling and going to hurt yourself and you feel sad. Find the same picture on the answer sheet. On the booklet the unhappy face is in a box. On the answer sheet circle the unhappy face. That face says "I don't like this."

TURN PAGE

You are sitting with nothing to do. The face in the box says "I don't care." Find the same picture on the answer sheet, and circle the "I don't care" face.

TURN PAGE

Answer Sheet

Instructions for "X" booklet page 2

You are bouncing a ball and you like it a little. The face in the box says "I like it a little." Find the same picture on the answer sheet, and circle the "I like it a little" face.

Now let's see if you can remember what the faces say:

TURN PAGE

Look at the picture in the booklet. On your answer sheet next to the same picture, circle the face that says "I like it very much."

TURN PAGE

Look at the picture. On your answer sheet next to the same picture, circle the face that says "I don't like it."

TURN PAGE

Look at the picture. On your answer sheet, circle the face that says "I don't care."

TURN PAGE

On your answer sheet circle the face that says "I like it a little."

Remember you have a striped shirt or dress and you are in most of the pictures.

TURN PAGE

Look at the big picture, on the answer sheet circle the face that tells how you feel about what you are doing.

The little picture on the answer sheet looks like the big one, and shows you on what line to put your answer. Circling a face is your answer.

Remember, you are the one with the striped shirt or dress.

Do every page in the book.

(After one minute)

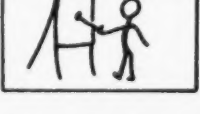
Remember, you have a striped shirt or dress. See what you are doing, or what is happening in the picture, and circle the face on the answer sheet that tells how you feel about it.

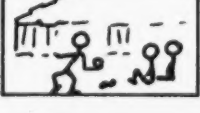
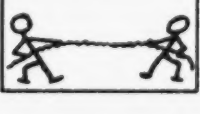
VALUES INVENTORY FOR CHILDREN

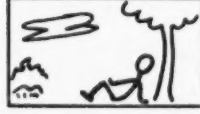
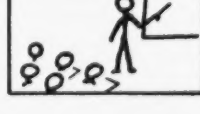
X

Name: _____ Age: _____ Birthdate: _____

Teacher: _____ Grade: _____ Sex: Boy Girl

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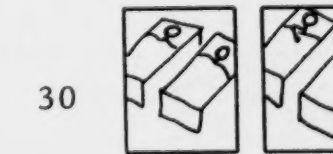
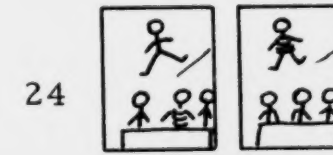
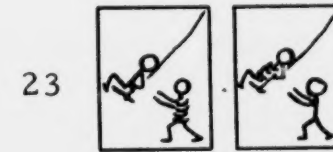
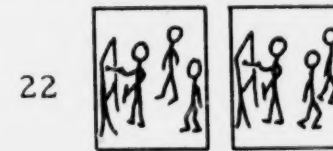
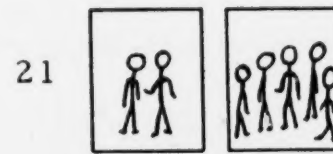
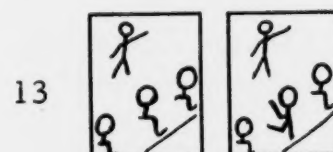
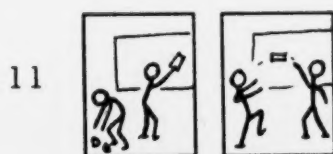
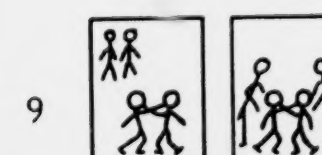
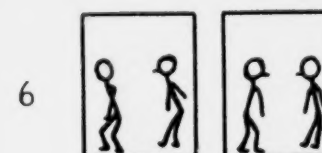
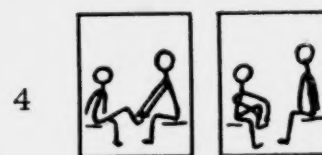
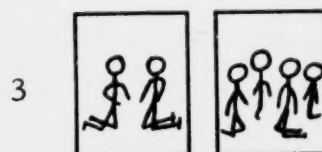
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VALUES INVENTORY FOR CHILDREN

Y

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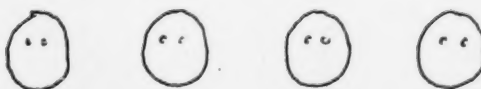


Instructions for Administration of the Revised VIC (50 items)

X Answer Sheet

(Hand out Answer Sheets)

(Draw faces with no mouth on board)



(Hold up Answer Sheet) This is an Answer Sheet. Fill out the top by writing your first and last name (point) your age, your teacher's name and your grade. If you are a boy, circle boy. If you are a girl, circle girl. When you are finished put down your pencils and look up at me.

(Hand out X booklets)

I am giving you each a booklet. Listen carefully. DO NOT write in the booklets. Other boys and girls will use your booklet and you must not write in them. You write only on the Answer Sheet.

(Hold up Answer Sheet)

(Holding up book) See this person in the striped clothes. This is you. Whenever you see the person in the striped clothes doing something in your book, that will be you doing something. You tell how you feel about what you are doing by circling an answer face.

Look up here. If you like what you are doing in the picture you circle this face (draw large smile)



This face says, "I like what I am doing." Say it...(Class responds)
"I like what I'm doing."

If you don't like what you are doing, you circle this face. (draw frown).
This face says, "I don't like what I'm doing." Say it...
(Class responds) "I don't like what I'm doing."



TURN THE PAGE (Hold up book) (See that all children are on page i.)

Point to the face that says, "I like what I'm doing." (point)
Point to the face that says, "I don't like what I'm doing." (point).

TURN THE PAGE (Hold up book)
(Hold up Answer Sheet and put finger on each picture
as training items are described)

There you are in your striped clothes eating ice cream and you like it very much. Find that picture on your answer sheet here, put your finger on it. Next to this picture circle the face on your answer sheet that says, "I like what I'm doing very much." "I like eating ice cream very much." Did you circle this face?
(On board circle  face.)

TURN THE PAGE (Hold up book)

You are falling down and going to hurt yourself, and you don't like what you are doing. Find that picture on your answer sheet underneath the first one, point to it. Circle the face on your answer sheet that says, "I don't like what I'm doing." Did you circle this face? (Circle  face.)

TURN THE PAGE (Hold up book)

You are sitting there with nothing to do. You don't know how you feel. (Draw straight line on face    ) This is the face that says, "I don't know how I feel." Say it. (Wait for response). Point to the picture on your answer sheet. Circle this face and say, "I don't know how I feel."

TURN THE PAGE (Hold up book)

You are bouncing a ball. You like what you are doing a little bit. (Draw slight smile on face    ) This is the face that says, "I like what I'm doing a little bit." Say it. (Wait for response). Point to the picture on your answer sheet. Circle this face and say, "I like what I'm doing a little bit."

Look up here and let's say the faces again. (point)  This face says, "I don't like what I am doing." Say it...

(Point to face)  "I don't know how I feel." Say it...

(Point to face)  "I like what I'm doing a little bit." Say it...

(Point to face)  "I like what I'm doing very much." Say it...

TURN THE PAGE (Hold up book)

Point to yourself in the striped clothes. You are throwing rocks on the freeway and you could hurt someone or cause an accident. You don't like what you're doing. Point to the picture on the answer sheet. Circle the face on the answer sheet that says, "I don't like what I'm doing."

TURN THE PAGE (Hold up book)

Find yourself in the striped clothes. You are getting a present and you like that very much. Circle the face on the answer sheet that says, "I like what I'm doing very much. I like getting presents."

TURN THE PAGE (Hold up book)

You are in the striped clothes playing tug-of-war. Look up at me! (Explain) I don't know how you feel about playing tug of war. Some of you may like to and some of you may not. You circle the face that tells how you feel about it. If you like tug-of-war, circle this (Point to face on answer sheet) face (recircle  on board). If you don't like it, circle this (Point to face on answer sheet) face (recircle  on board). The face that tells how you feel is the right face.

Now you finish the rest of the book by yourself. Turn the page. Look for yourself in the striped clothes. Circle the face on the answer sheet that tells how you feel about what you are doing.

(Put up dividers)

Y - ANSWER SHEET

(Hold up book)

Look at the cover (pointing) This is you in the striped clothes

TURN THE PAGE -

Look for the difference in the two pictures. It is raining and in one picture you don't have a raincoat and you will get wet. In your booklet, point to yourself - without a raincoat (wait and check) in the other picture you have on a raincoat and you will stay dry. Point to yourself wearing a raincoat.

(Hold up booklet & answer sheet)

Point to the same pictures on your answer sheet and circle the one you like the best. If you like to stay dry -- circle the one that shows you wearing a raincoat. If you want to get wet -- circle the one that shows you not wearing a raincoat.

Finish the rest of the book by yourself. Look for yourself in the striped clothes. Look for the difference, and on the answer sheet circle the one you like the best.

If you have any questions, raise your hand.

X

VALUES INVENTORY FOR CHILDREN

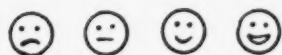
Name: _____ Age: _____ Birthdate: _____

Teacher: _____ Grade: _____ Sex: Boy Girl

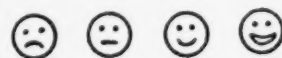
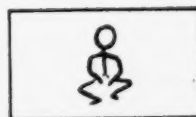
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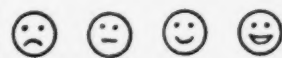
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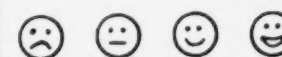
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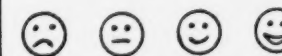
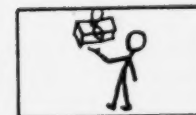
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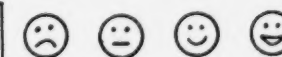
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vii



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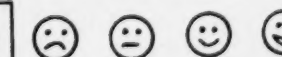
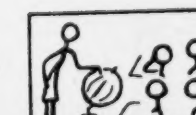
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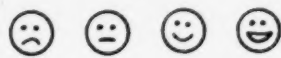
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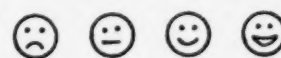
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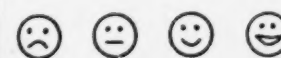
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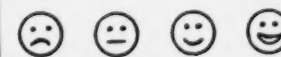
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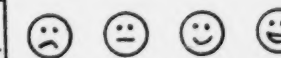
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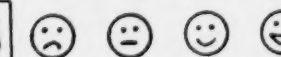
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11



12



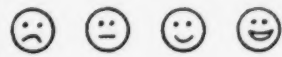
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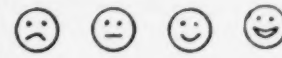
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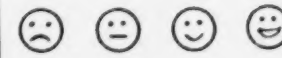
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16



17



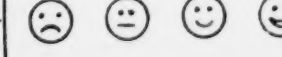
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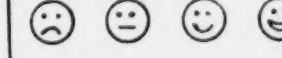
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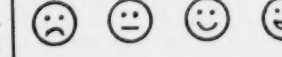
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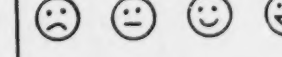
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23



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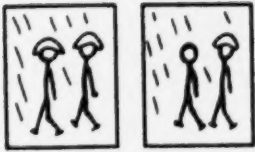


VALUES INVENTORY FOR CHILDREN

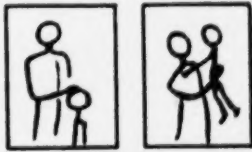
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Name: _____

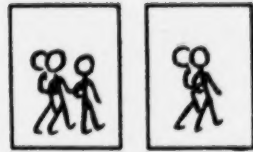
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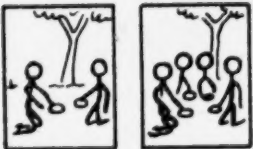
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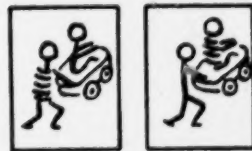
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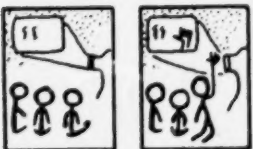
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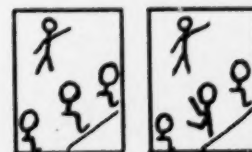
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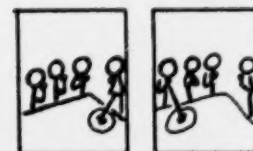
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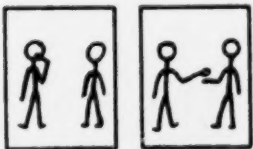
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44



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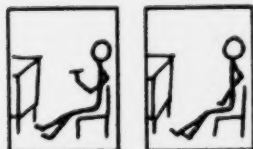
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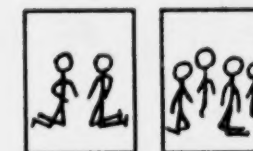
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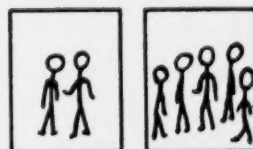
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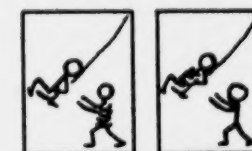
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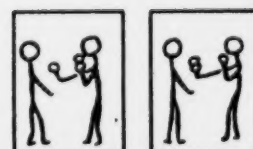
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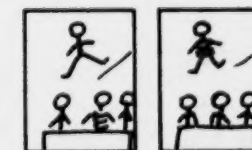
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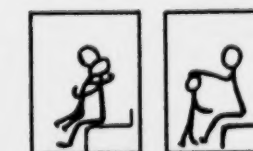
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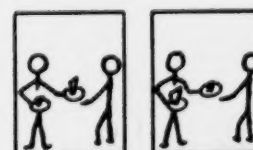
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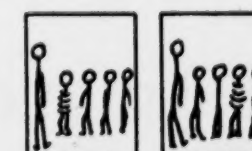
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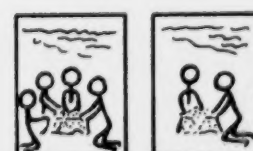
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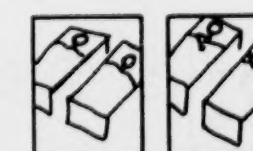
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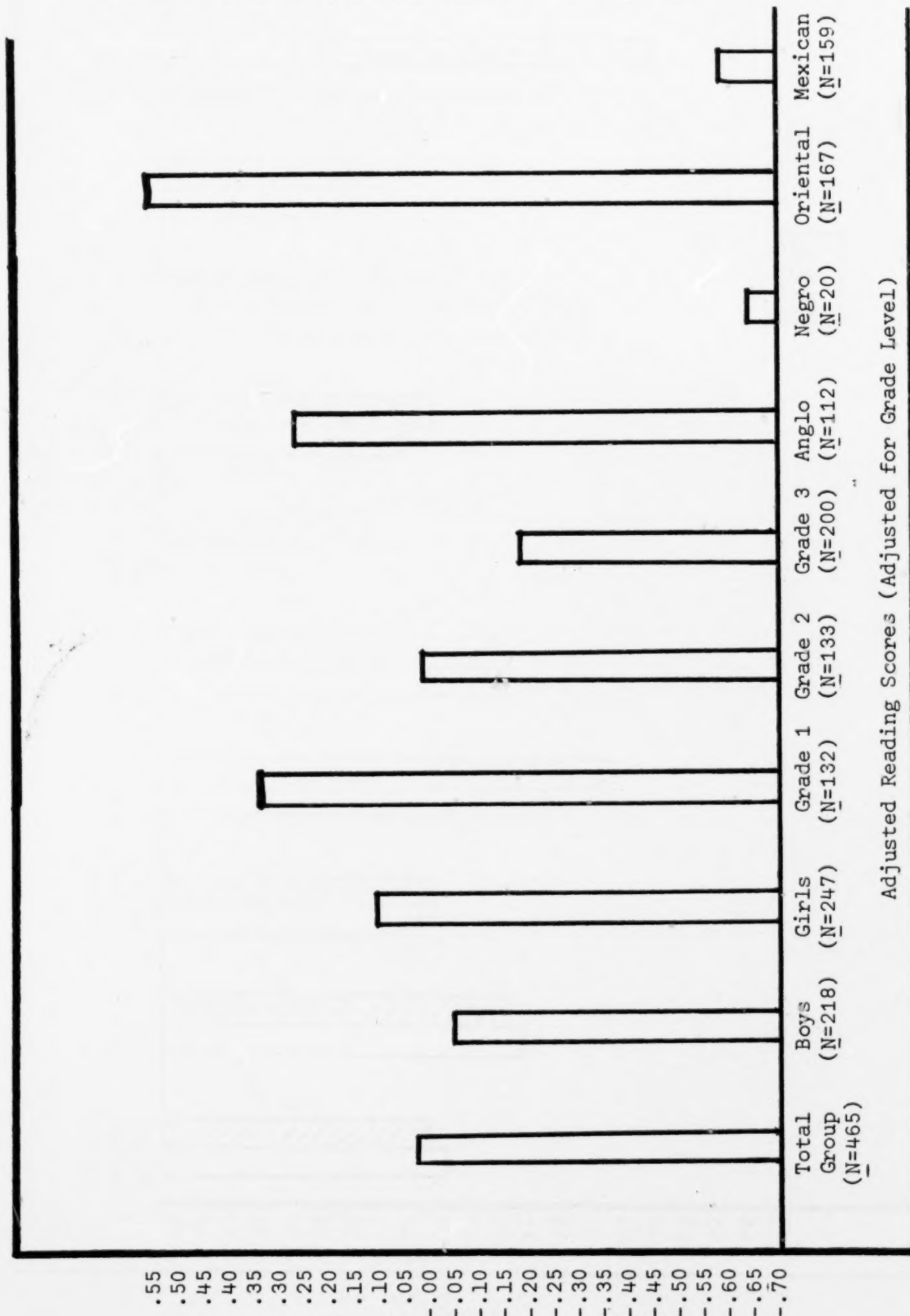


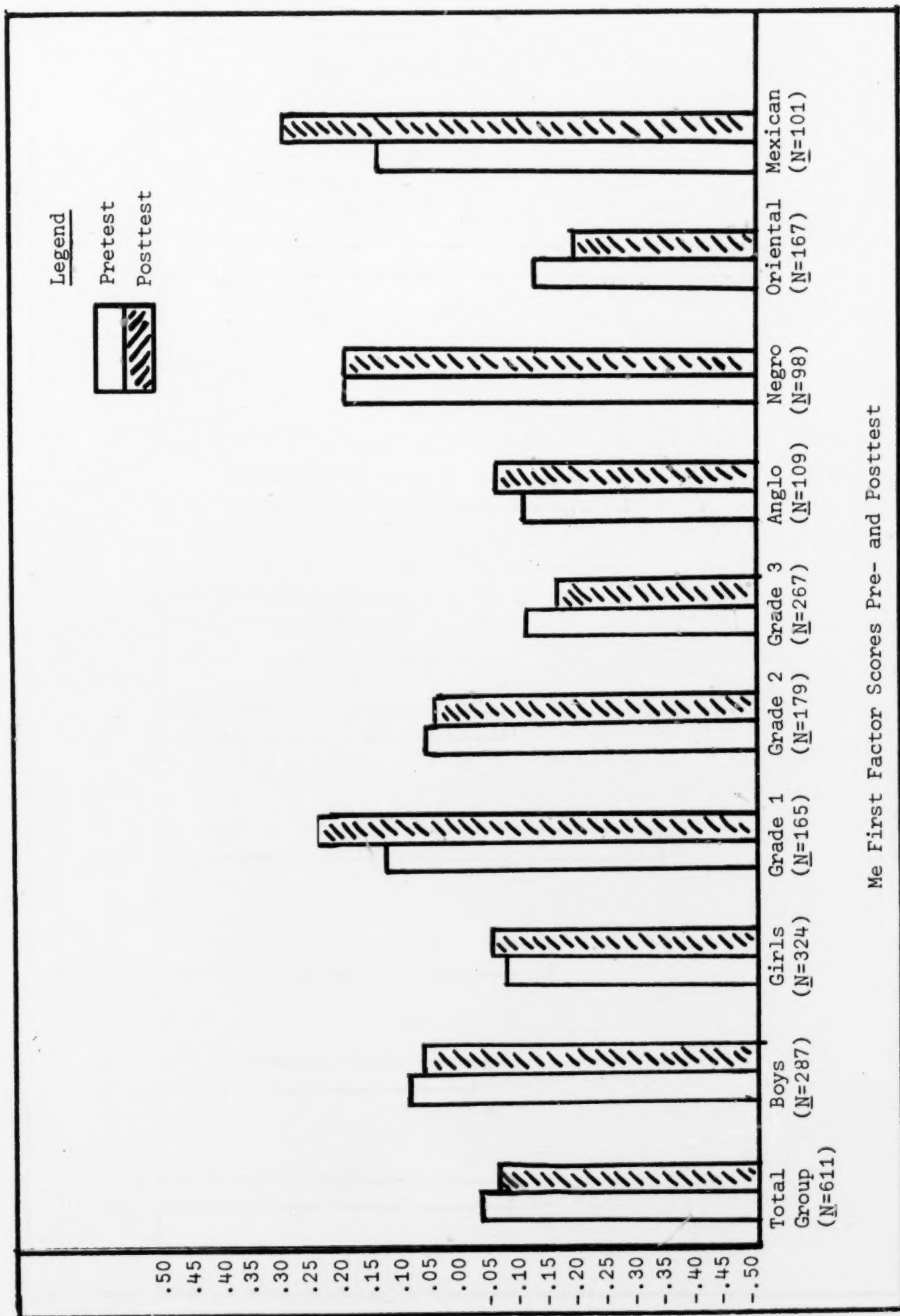
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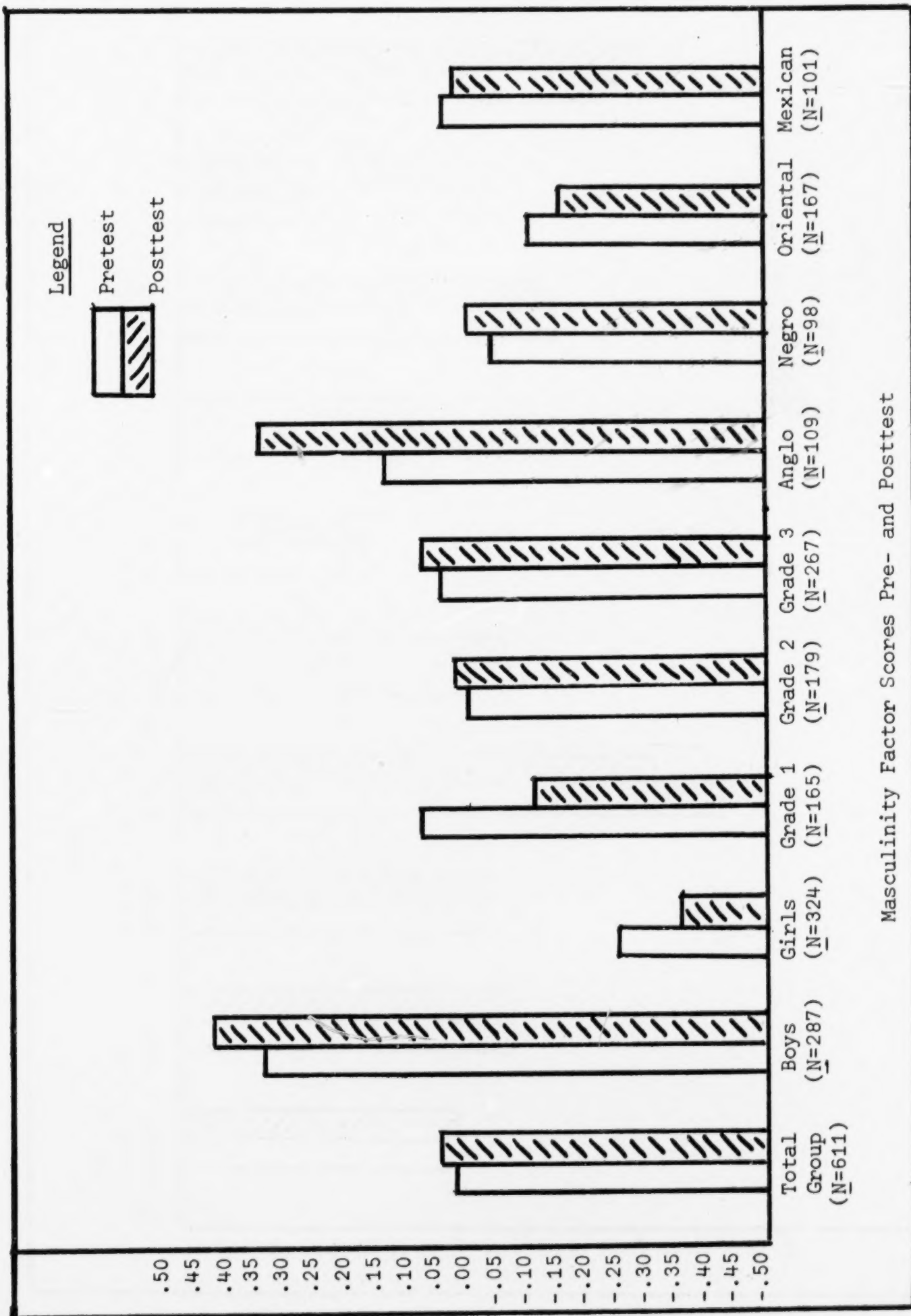


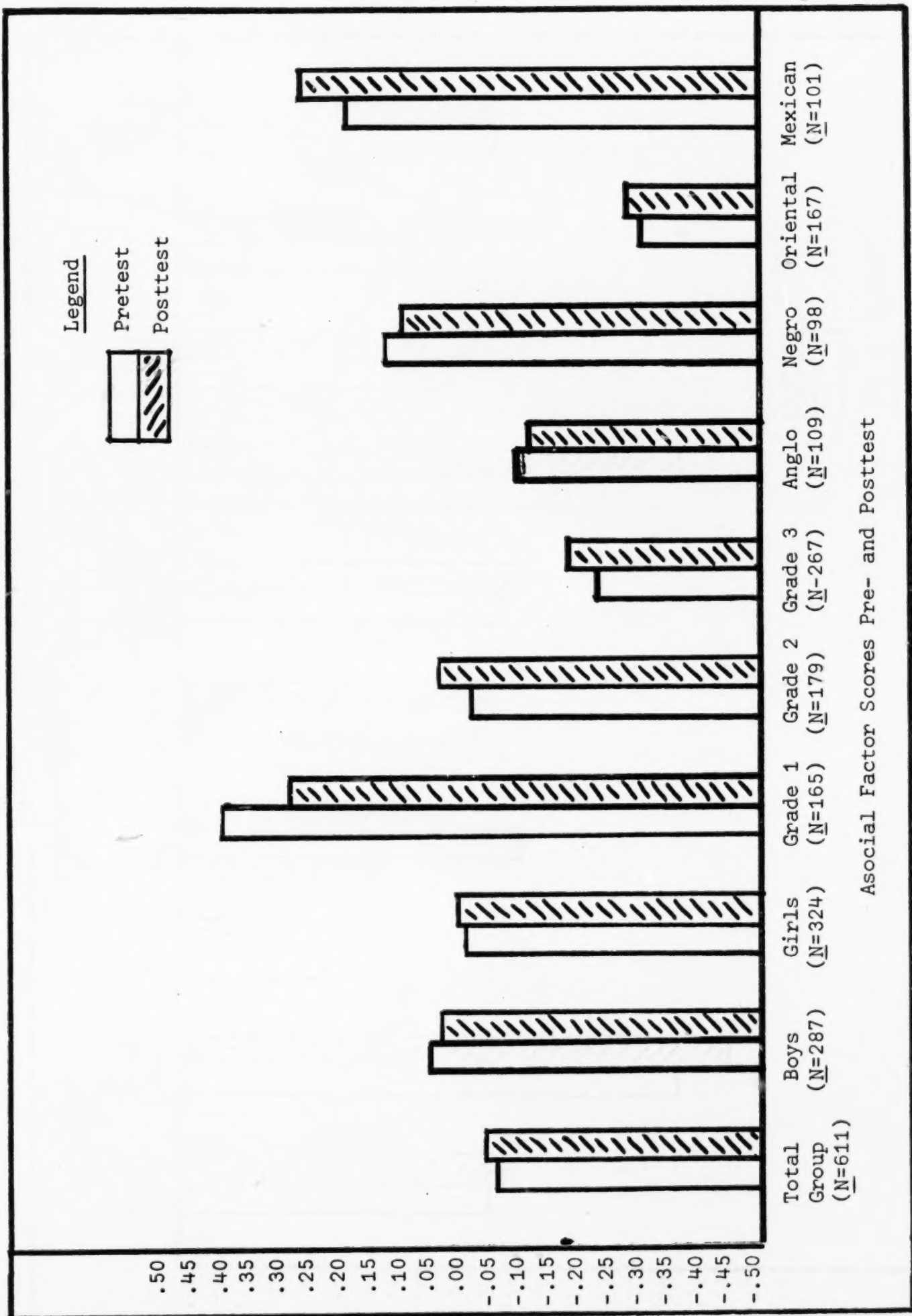
APPENDIX F

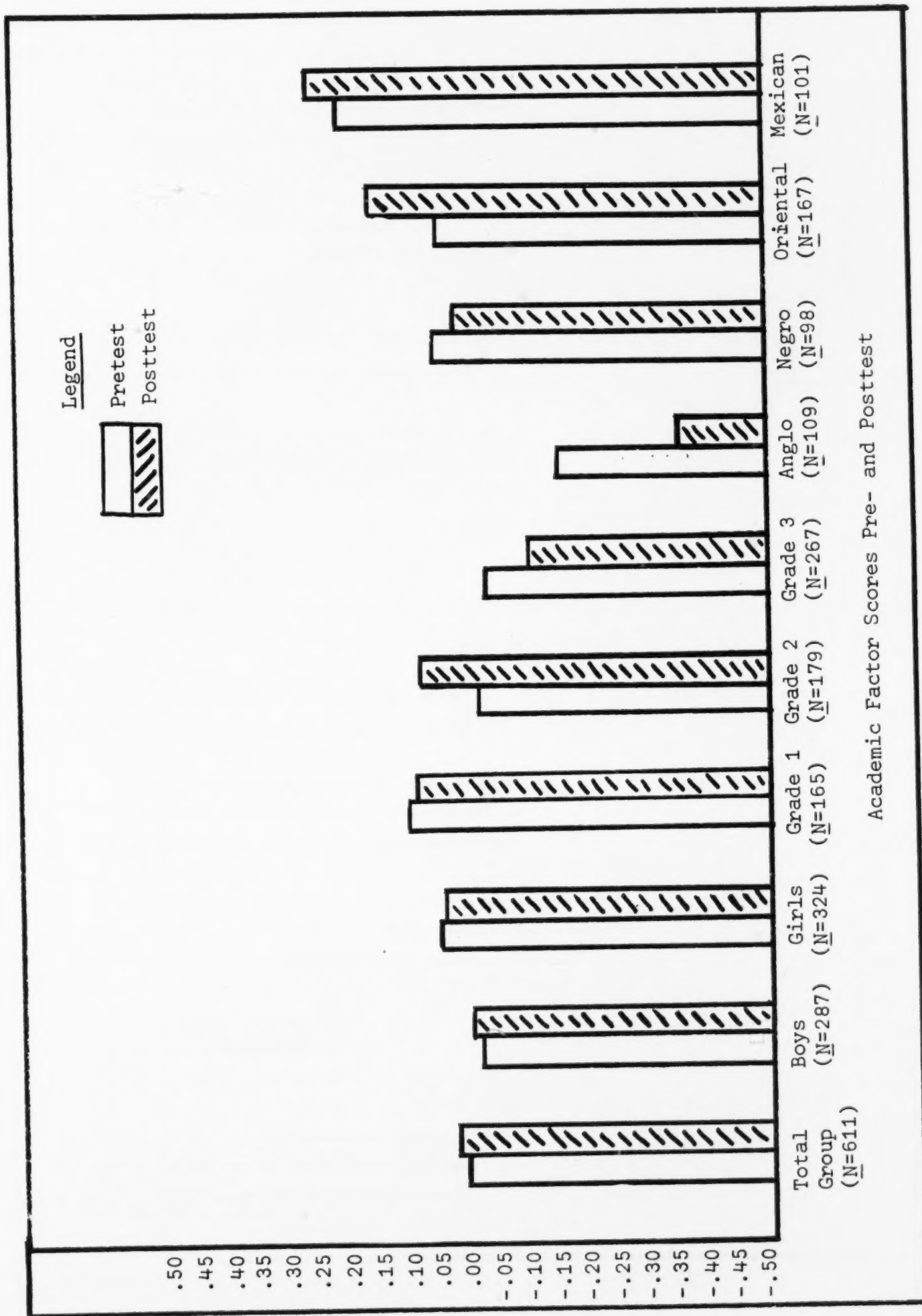
Graphic Representation of Reading Scores, Factor Scores, and Teacher-Child Congruities for Pre- and Posttest Samples

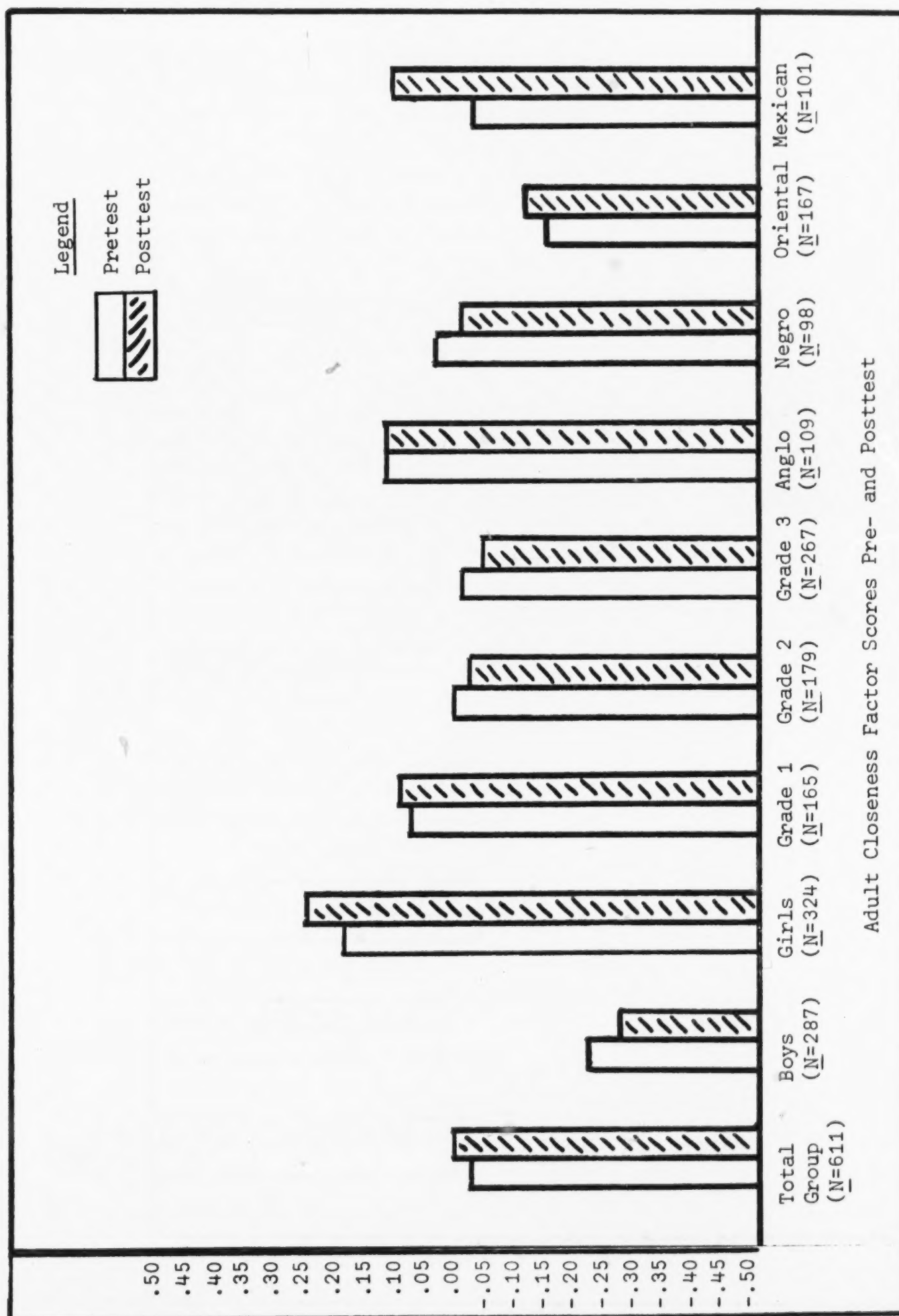


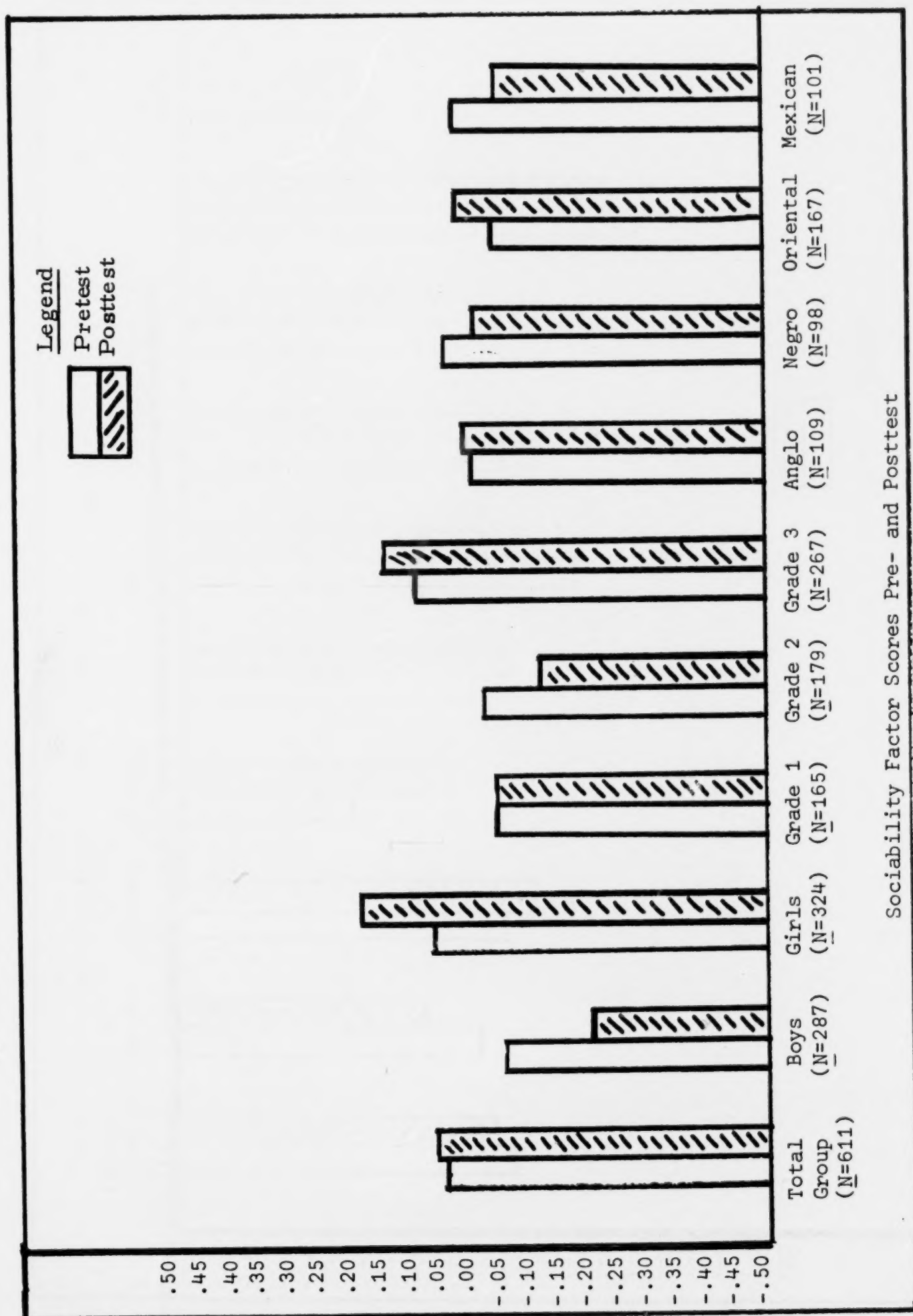


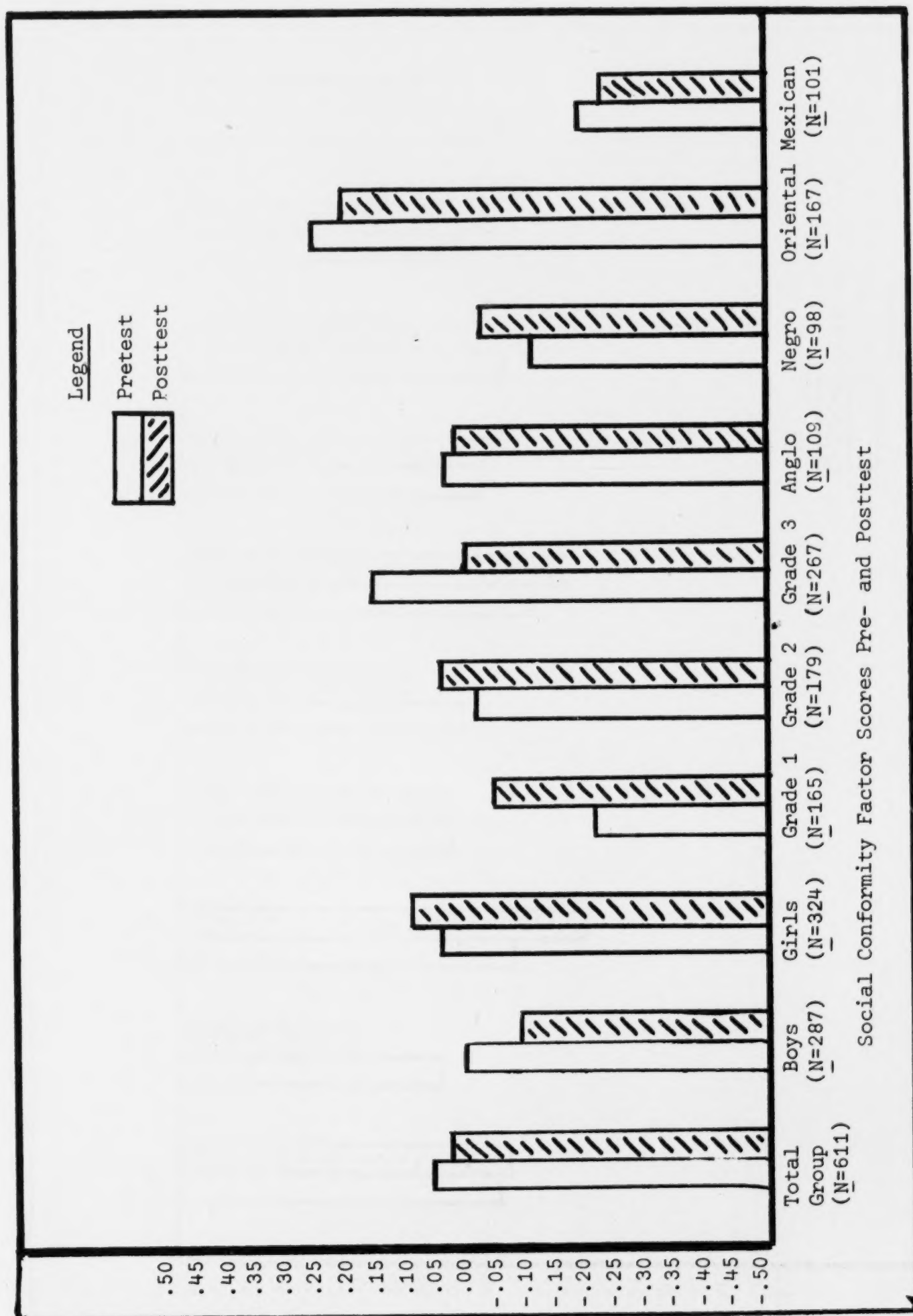


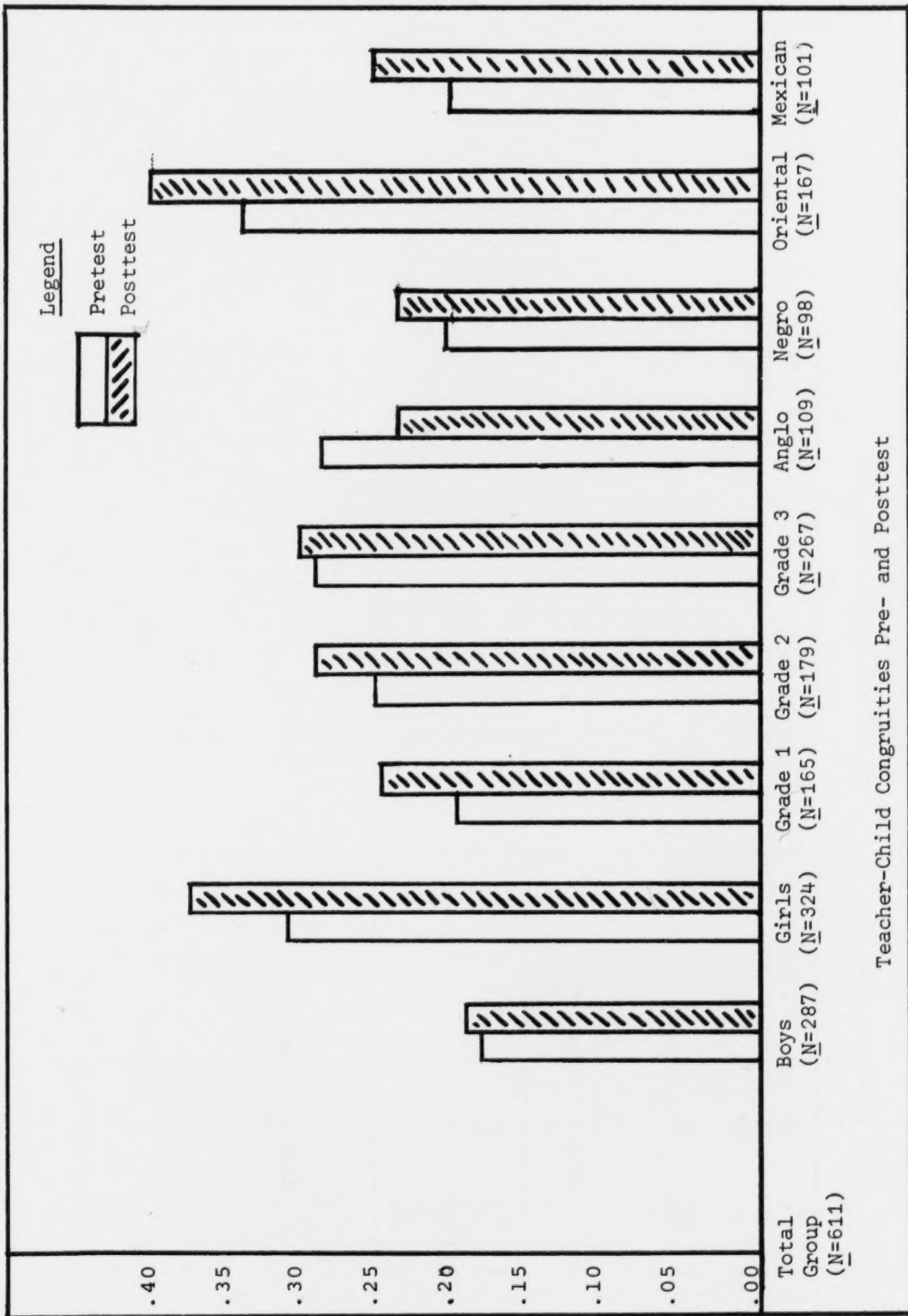












Appendix G

Item Response Distributions for Revised VIC by Ethnic Group
(A=Anglo; N=Negro; M=Mexican-American; T=Total)

Item Response Distributions (in Percentages) by Ethnic Group and for
the Total Fall Test Sample (N=1167)

		Item 1- Tug of War					Item 2- Studying				
		1	2	3	4	5	1	2	3	4	5
A	21	21	2	2	23	33	22	16	2	25	35
N	22	15	1	1	19	43	17	18	2	16	57
M	25	18	1	1	17	39	16	8	0	20	56
T	23	19	1	1	20	37	19	11	1	21	48

		Item 3 - Water Man					Item 4 - Globe				
		1	2	3	4	5	1	2	3	4	5
A	84	10	1	1	2	3	3	10	1	31	55
N	75	12	0	0	4	9	5	12	1	23	59
M	86	7	1	1	3	3	5	8	1	27	59
T	83	9	1	1	3	4	4	9	1	28	58

		Item 5 - Jump					Item 6 - Cave				
		1	2	3	4	5	1	2	3	4	5
A	64	7	2	2	10	17	40	35	1	11	13
N	56	6	1	1	10	27	46	28	2	9	15
M	63	8	1	1	9	19	52	25	1	11	11
T	62	7	1	1	10	20	46	30	1	11	12

Item 7 - Dump

1	2	3	4	5
81	5	1	5	8
79	4	2	5	10
83	6	1	2	8
81	5	1	4	9

A
N
M
T

Item 8 - Class Read

1	2	3	4	5
6	8	1	22	63
4	7	3	22	64
4	4	1	18	73
5	6	2	20	67

A
N
M
T

Item 9 - Ghosts

1	2	3	4	5
43	17	3	10	27
49	13	3	8	27
60	15	1	8	16
51	15	2	9	23

A
N
M
T

Item 10 - Halloween

1	2	3	4	5
61	10	1	9	19
54	6	0	8	32
53	10	1	9	27
56	9	1	9	25

A
N
M
T

Item 11 - Classroom

1	2	3	4	5
7	16	1	22	54
13	13	0	14	60
9	10	1	20	60
9	14	1	19	57

A
N
M
T

Item 12 - Boxing

1	2	3	4	5
41	17	2	14	26
35	13	2	15	35
40	14	1	14	31
39	15	2	14	30

A
N
M
T

Item 13 - Cake

1	2	3	4	5
41	9	0	9	41
33	7	1	9	50
39	9	1	7	44
38	9	1	8	44

A
N
M
T

Item 14 - Stealing

1	2	3	4	5
81	7	1	5	6
71	10	1	7	11
79	7	2	4	8
78	8	1	5	8

A
N
M
T

Item 15 - Teacher

1	2	3	4	5
12	20	0	23	45
12	15	1	19	53
11	12	1	25	51
12	15	1	23	49

A
N
M
T

Item 16 - Littering

1	2	3	4	5
85	5	1	5	4
68	10	1	10	11
76	9	1	6	8
78	8	1	6	7

A
N
M
T

Item 17 - Soldier

1	2	3	4	5
56	16	2	8	18
56	17	2	8	17
56	15	2	11	16
56	16	2	9	17

A
N
M
T

Item 18 - Writing

1	2	3	4	5
5	7	1	20	67
6	5	1	15	73
3	5	1	18	73
5	6	1	18	70

A
N
M
T

Item 19 - Pool

1	2	3	4	5
68	6	1	5	20
64	4	0	5	27
65	5	1	5	24
66	5	1	5	23

A
N
M
T

Item 20 - School

1	2	3	4	5
8	11	1	21	59
8	8	1	19	64
10	6	1	19	64
9	8	1	20	62

A
N
M
T

Item 21 - Knife

1	2	3	4	5
39	21	1	16	23
42	19	2	15	22
47	18	2	15	18
43	19	2	15	21

A
N
M
T

Item 22 - Fence

1	2	3	4	5
76	9	0	6	9
68	12	2	7	11
72	10	2	4	12
73	10	1	6	10

A
N
M
T

Item 23 - Snake

1	2	3	4	5
69	19	1	5	6
65	15	2	9	9
69	18	1	6	6
68	18	1	6	7

A
N
M
T

Item 24 - Reading

1	2	3	4	5
11	15	0	21	53
9	11	1	19	60
9	14	1	16	60
9	14	1	19	57

A
N
M
T

Item 25 - Picnic 1/+

	2	3	4
A	21	0	79
N	24	1	75
M	20	1	79
T	21	1	78

Item 26 - Movie/Hand

	2	3	4
A	87	1	12
N	85	0	15
M	88	1	11
T	87	1	12

Item 27 - Eat/Share

	2	3	4
A	25	1	74
N	31	1	68
M	23	0	77
T	25	1	74

Item 28 - Smoke/Not

	2	3	4
A	8	1	91
N	13	1	86
M	14	2	84
T	11	1	88

Item 29 - Talk 1/+

	2	3	4
A	25	1	74
N	25	0	75
M	22	2	76
T	24	1	75

Item 30 - Cave 2/1

	2	3	4
A	30	1	69
N	45	1	54
M	34	1	65
T	35	1	64

Item 31 - Small/large

	2	3	4
A	71	2	27
N	59	2	39
M	68	1	31
T	68	1	31

Item 32 - Castle +/-

	2	3	4
A	74	1	25
N	72	1	27
M	75	0	25
T	74	1	25

Item 33 - Pat/hug-F

	2	3	4
A	15	0	85
N	17	1	82
M	17	1	82
T	16	1	83

Item 34 - Push/ride

	2	3	4
A	62	0	38
N	56	0	44
M	63	0	37
T	61	0	39

Item 35 - Listen/talk

	2	3	4
A	91	0	9
N	86	1	13
M	90	0	10
T	90	0	10

Item 36 - Duty/play

	2	3	4
A	88	2	10
N	81	2	17
M	89	1	10
T	87	1	12

Item 37 - Dance +/-1

	2	3	4
A	87	0	13
N	83	1	16
M	87	0	13
T	86	0	14

Item 38 - Push/swing

	2	3	4
A	60	0	40
N	52	1	47
M	60	0	40
T	58	1	41

Item 39 - Watch/play

	2	3	4
A	41	1	58
N	34	1	65
M	47	1	52
T	42	1	57

Item 40 - 1st/3rd

	2	3	4
A	50	1	49
N	62	2	36
M	60	0	40
T	57	1	42

Item 41 - Student/teacher

	2	3	4
A	51	0	49
N	40	1	59
M	46	1	53
T	47	1	52

Item 42 - Walk 2/1

	2	3	4
A	70	0	30
N	71	1	28
M	78	0	22
T	73	0	27

Item 45 - Toss/roll

	2	3	4
A	24	0	76
N	28	1	72
M	29	0	26
T	27	0	73

Item 48 - Hugh/pat - M

	2	3	4
A	82	0	18
N	80	1	19
M	80	1	19
T	81	1	18

Item 44 - Take/No

	2	3	4
A	41	1	58
N	53	0	47
M	46	1	53
T	45	1	54

Item 47 - Wash/play

	2	3	4
A	90	0	10
N	85	1	14
M	89	1	10
T	88	1	11

Item 50 - Sleep/talk

	2	3	4
A	75	1	24
N	70	2	28
M	76	1	23
T	75	1	24

Item 43 - Bed/up

	2	3	4
A	86	1	13
N	81	2	17
M	82	1	17
T	84	1	15

Item 46 - Play 1/+

	2	3	4
A	42	0	58
N	37	0	63
M	41	0	59
T	40	0	60

Item 49 - Leave/pickup

	2	3	4
A	17	1	82
N	23	2	75
M	18	1	81
T	19	1	80

APPENDIX H

Derived Score Distributions by Sex, Grade, and Ethnic Group

ASOCIAL SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
6	0	0	0	1	.2	.2
7	1	.2	.2	0	0	.2
8	9	1.5	1.7	6	1.1	1.3
9	109	17.7	19.4	122	21.9	23.2
10	35	5.7	25.1	29	5.2	28.4
11	31	5.1	30.2	42	7.6	36.0
12	93	15.1	45.3	79	14.3	50.3
13	31	5.1	50.4	33	6.0	56.3
14	18	2.9	53.3	27	4.9	61.2
15	38	6.1	59.4	35	6.3	67.5
16	24	3.9	63.3	14	2.5	70.0
17	28	4.6	67.9	15	2.7	72.7
18	36	5.9	73.8	21	3.8	76.5
19	9	1.5	75.3	11	2.0	78.5
20	10	1.6	76.9	14	2.5	81.0
21	26	4.2	81.1	21	3.8	84.8
22	14	2.3	83.4	8	1.4	86.2
23	4	.7	84.1	9	1.6	87.8
24	23	3.8	87.9	11	2.0	89.8
25	10	1.6	89.5	12	2.2	92.0
26	14	2.3	91.8	5	.9	92.9
27	12	2.0	93.8	11	2.0	94.9
28	11	1.8	95.6	3	.5	95.4
29	5	.8	96.4	5	.9	96.3
30	8	1.3	97.7	5	.9	97.2
31	3	.5	98.2	6	1.1	98.3
32	4	.7	98.9	1	.2	98.5
33	2	.3	99.2	5	.9	99.4
34	0	0	99.2	1	.2	99.6
35	2	.3	99.5	0	0	99.6
36	3	.5	100.0	2	.4	100.0

ACADEMIC SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
9	1	.2	.2	1	.2	.2
10	2	.3	.5	0	0	.2
11	3	.5	1.0	0	0	.2
12	1	.2	1.2	0	0	.2
13	4	.7	1.9	2	.4	.6
14	5	.8	2.7	1	.2	.8
15	6	1.0	3.7	8	1.4	2.2
16	2	.3	4.0	2	.4	2.6
17	18	2.9	6.9	8	1.4	4.0
18	18	2.9	9.8	7	1.3	5.3
19	19	3.1	12.9	11	2.0	7.3
20	16	2.6	15.5	16	2.9	10.2
21	10	1.6	17.1	17	3.1	13.3
22	32	5.2	22.3	26	4.7	18.0
23	40	6.5	28.8	25	4.5	22.5
24	42	6.9	35.7	32	5.8	28.3
25	42	6.9	42.6	35	6.3	34.6
26	46	7.5	50.1	59	10.6	45.2
27	46	7.5	57.6	40	7.2	52.4
28	42	6.9	64.5	36	6.5	58.9
29	64	10.4	74.9	64	11.6	70.5
30	30	4.9	79.8	44	7.9	78.4
31	38	6.2	86.0	31	5.6	84.0
32	86	14.0	100.0	89	16.0	100.0

MASCULINITY SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
3	1	.2	.2	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6						
7	7	1.1	1.6	39	7.0	7.2
8	12	2.0	3.6	30	5.4	12.6
9	19	3.1	6.7	41	7.4	20.0
10	28	4.6	11.3	57	10.3	30.3
11	32	5.2	16.5	61	11.0	41.3
12	35	5.7	22.2	67	12.2	53.5
13	64	10.3	32.5	58	10.5	64.0
14	50	8.2	40.7	41	7.4	71.4
15	52	8.5	49.2	37	6.7	78.1
16	67	10.8	60.0	39	7.0	85.1
17	31	5.1	65.1	18	3.2	88.3
18	42	6.9	72.0	22	4.0	92.3
19	48	7.8	79.8	12	2.2	94.5
20	29	4.7	84.5	9	1.6	96.1
21	23	3.8	88.3	10	1.8	97.9
22	23	3.8	92.1	4	.7	98.6
23	11	1.8	93.9	3	.5	99.1
24	15	2.4	96.3	1	.2	99.3
25	14	2.3	98.6	3	.5	99.8
26	3	.5	99.1	1	.2	100.0
27	4	.7	99.8	0	0	100.0
28	1	.2	100.0	0	0	100.0

ME FIRST SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
15	1	.2	.2	0	0	0
16	4	.7	.9	2	.4	.4
17	4	.7	1.6	3	.5	.9
18	79	12.8	14.4	134	24.2	25.1
19	61	10.0	24.4	71	12.8	37.9
20	51	8.3	32.7	53	9.6	47.5
21	69	11.2	43.9	59	10.6	58.1
22	66	10.8	54.7	49	8.8	66.9
23	62	10.1	64.8	43	7.8	74.7
24	64	10.4	75.2	45	8.1	82.8
25	58	9.5	84.7	29	5.2	88.0
26	46	7.5	92.2	38	6.9	94.9
27	48	7.8	100.0	28	5.1	100.0

ADULT CLOSENESS SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
2	1	.2	.2	0	0	0
3	7	1.1	1.3	4	.7	.7
4	87	14.2	15.5	20	3.6	4.3
5	123	20.1	35.6	70	12.6	16.9
6	395	64.4	100.0	460	83.1	100.0

SOCIAL CONFORMITY SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
10	3	.5	.5	0	0	0
11	4	.7	1.2	1	.2	.2
12	10	1.6	2.8	9	1.6	1.8
13	26	4.2	7.0	6	1.1	2.9
14	34	5.5	12.5	12	2.2	5.1
15	55	9.0	21.5	32	5.8	10.9
16	60	9.8	31.3	37	6.7	17.6
17	108	17.6	48.9	98	17.7	35.3
18	313	51.1	100.0	359	64.7	100.0

SOCIABILITY SCORES BY SEX

<u>Score</u>	<u>Male</u>			<u>Female</u>		
	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>	<u>Freq.</u>	<u>%</u>	<u>Cum. %</u>
9	0	0	0	1	.2	.2
10	1	.2	.2	1	.2	.4
11	5	.8	1.0	0	0	.4
12	21	3.4	4.4	9	1.6	2.0
13	37	6.0	10.4	22	4.0	6.0
14	72	11.7	22.1	31	5.6	11.6
15	86	14.0	36.1	46	8.3	19.9
16	93	15.2	51.3	72	13.0	32.9
17	99	16.2	67.5	124	22.4	55.3
18	199	32.5	100.0	248	44.7	100.0

ASOCIAL SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
6	0	0	0	0	0	0
7	1	.4	.4	0	0	0
8	1	.4	.8	9	3.1	3.1
9	3.4	12.3	13.1	62	21.8	24.9
10	7	2.5	15.6	13	4.6	29.5
11	11	4.0	19.6	24	8.5	38.0
12	42	15.1	34.7	45	15.8	53.8
13	6	2.2	36.9	16	5.7	59.5
14	6	2.2	39.1	10	3.5	63.0
15	13	4.7	43.8	19	6.7	69.7
16	7	2.5	46.3	7	2.4	72.1
17	11	4.0	50.3	10	3.5	75.6
18	22	7.9	58.2	9	3.1	78.7
19	5	1.8	60.0	2	.7	79.4
20	5	1.8	61.8	6	2.1	81.5
21	12	4.3	66.1	15	5.3	86.8
22	10	3.6	69.7	5	1.7	88.5
23	4	1.4	71.1	2	.7	89.2
24	18	6.5	77.6	6	2.1	91.3
25	11	4.0	81.6	2	.7	92.0
26	8	2.9	84.5	3	1.0	93.0
27	12	4.3	88.8	5	1.7	94.7
28	7	2.5	91.3	5	1.7	96.4
29	4	1.4	92.7	1	.3	96.7
30	9	3.2	95.9	2	.7	97.4
31	6	2.2	98.1	0	0	97.4
32	1	.4	98.5	1	.3	97.7
33	2	.7	99.2	4	1.4	99.1
34	0	0	99.2	0	0	99.1
35	1	.4	99.6	1	.3	99.4
36	1	.4	100.0	2	.6	100.0

ASOCIAL SCORES BY GRADE

<u>Score</u>	GRADE 3			GRADE 4		
	<u>Freq.</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
6	1	.3	.3	0	0	0
7	0	0	.3	0	0	0
8	4	1.3	1.6	1	.3	.3
9	70	22.8	24.4	65	22.0	22.3
10	23	7.5	31.9	21	7.1	29.4
11	24	7.9	39.8	14	4.7	34.1
12	38	12.4	52.2	47	15.9	50.0
13	21	6.8	59.0	21	7.1	57.1
14	11	3.6	62.6	18	6.1	63.2
15	20	6.5	69.1	21	7.1	70.3
16	13	4.2	73.3	11	3.7	74.0
17	10	3.2	76.5	12	4.1	78.1
18	17	5.5	82.0	9	3.0	81.1
19	7	2.3	84.3	6	2.0	83.1
20	7	2.3	86.6	6	2.0	85.1
21	10	3.2	89.8	10	3.4	88.5
22	3	1.0	90.8	4	1.4	89.9
23	2	.6	91.4	5	1.7	91.6
24	4	1.3	92.7	6	2.0	93.6
25	6	1.9	94.6	3	1.0	94.6
26	3	1.0	95.6	5	1.7	96.3
27	4	1.3	96.9	2	.7	97.0
28	1	.3	97.2	1	.3	97.3
29	1	.3	97.5	4	1.4	98.7
30	1	.3	97.8	1	.3	99.0
31	3	1.0	98.8	0	0	99.0
32	1	.3	99.1	2	.7	99.7
33	1	.3	99.4	0	0	99.7
34	0	0	99.4	1	.3	100.0
35	0	0	99.4	0	0	100.0
36	2	.6	100.0	0	0	100.0

ACADEMIC SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
9	1	.4	.4	1	.3	.3
10	0	0	.4	1	.3	.6
11	0	0	.4	1	.3	.9
12	0	0	.4	1	.3	1.2
13	1	.4	.8	2	.7	1.9
14	4	1.4	2.2	1	.3	2.2
15	5	1.8	4.0	3	1.0	3.2
16	2	.7	4.7	0	0	3.2
17	9	3.2	7.9	5	1.7	4.9
18	11	4.0	11.9	0	0	4.9
19	10	3.6	15.5	7	2.4	7.3
20	14	5.1	20.6	6	2.1	9.4
21	9	3.2	23.8	2	.7	10.1
22	19	6.9	30.7	8	2.8	12.9
23	11	4.0	34.7	12	4.2	17.1
24	17	6.1	40.8	18	6.4	23.5
25	15	5.4	46.2	21	7.3	30.8
26	23	8.2	54.4	24	8.5	39.3
27	21	7.6	62.0	22	7.7	47.0
28	14	5.1	67.1	22	7.7	54.7
29	19	6.9	74.0	36	12.7	67.4
30	19	6.9	80.9	14	4.9	72.3
31	11	4.0	84.9	22	7.7	80.0
32	42	15.1	100.0	57	20.0	100.0

ACADEMIC SCORES BY GRADE

<u>Scores</u>	GRADE 3			GRADE 4		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
9	0	0	0	0	0	0
10	0	0	0	1	.3	.3
11	1	.3	.3	1	.3	.6
12	0	0	.3	0	0	.6
13	1	.3	.6	2	.7	1.3
14	1	.3	.9	0	0	1.3
15	4	1.3	2.2	2	.7	2.0
16	1	.3	2.5	1	.3	2.3
17	8	2.6	5.1	4	1.4	3.7
18	8	2.6	7.7	6	2.0	5.7
19	3	1.0	8.7	10	3.4	9.1
20	8	2.6	11.3	4	1.4	10.5
21	6	1.9	13.2	10	3.4	13.9
22	16	5.2	18.4	15	5.1	19.0
23	18	5.8	24.2	24	8.1	27.1
24	18	5.8	30.0	21	7.1	34.2
25	19	6.2	36.2	22	7.4	41.6
26	29	9.4	45.6	29	9.8	51.4
27	24	7.8	53.4	19	6.4	57.8
28	22	7.1	60.5	20	6.8	64.6
29	40	13.1	73.6	33	11.0	75.6
30	21	6.8	80.4	20	6.8	82.4
31	15	4.9	85.3	21	7.1	89.5
32	45	14.7	100.0	31	10.5	100.0

MASCULINITY SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
3	1	.4	.4	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	1	.4	.8	2	.7	.7
7	6	2.2	3.0	18	6.3	7.0
8	7	2.5	5.5	14	4.9	11.9
9	14	5.1	10.6	12	4.2	16.1
10	25	9.0	19.6	23	8.1	24.2
11	17	6.1	25.7	20	7.1	31.3
12	26	9.4	35.1	19	6.7	38.0
13	29	10.5	45.6	25	8.8	46.8
14	27	9.7	55.3	15	5.2	52.0
15	19	6.9	62.2	19	6.7	58.7
16	21	7.6	69.8	27	9.5	68.2
17	12	4.3	74.1	18	6.3	74.5
18	16	5.8	79.9	15	5.2	79.7
19	12	4.3	84.2	18	6.3	86.0
20	8	2.9	87.1	7	2.4	88.4
21	12	4.3	91.4	9	3.1	91.5
22	9	3.2	94.6	7	2.4	93.9
23	4	1.4	96.0	3	1.0	94.9
24	5	1.8	97.8	3	1.0	95.9
25	4	1.4	99.2	9	3.1	99.0
26	1	.4	99.6	2.	.7	99.7
27	1	.4	100.0	1	.3	100.0
28	0	0	100.0	0	0	100.0

MASCULINITY SCORES BY GRADE

<u>Score</u>	<u>GRADE 3</u>			<u>GRADE 4</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
3	0	0	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	14	4.5	4.5	8	2.7	2.7
8	15	4.9	9.4	6	2.0	4.7
9	20	6.5	15.9	14	4.7	9.4
10	21	6.8	22.7	16	5.4	14.8
11	24	7.8	30.5	32	10.9	25.7
12	34	11.1	41.6	23	7.8	33.5
13	31	10.2	51.8	37	12.6	46.1
14	22	7.1	58.9	27	9.1	55.2
15	23	7.5	66.4	28	9.5	64.7
16	28	9.1	75.5	30	10.2	74.9
17	10	3.2	78.7	9	3.0	77.9
18	14	4.5	83.2	19	6.4	84.3
19	21	6.8	90.0	9	3.0	87.3
20	12	3.9	93.9	11	3.7	91.0
21	3	1.0	94.9	9	3.0	94.0
22	5	1.6	96.5	6	2.0	96.0
23	2	.6	97.1	5	1.7	97.7
24	4	1.3	98.4	4	1.4	99.1
25	3	1.0	99.4	1	.3	99.4
26	0	0	99.4	1	.3	99.7
27	1	.3	99.7	1	.3	100.0
28	1	.3	100.0	0	0	100.0

ME FIRST SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
15	1	.4	.4	0	0	0
16	2	.7	1.1	3	1.0	1.0
17	2	.7	1.8	3	1.0	2.0
18	23	8.3	10.1	56	19.7	21.7
19	23	8.3	18.4	34	12.0	33.7
20	27	9.7	28.1	24	8.4	42.1
21	40	14.5	42.6	31	10.8	52.9
22	32	11.6	54.2	25	8.7	61.6
23	23	8.3	62.5	28	9.8	71.4
24	34	12.3	74.8	33	11.6	83.0
25	25	9.0	83.8	15	5.2	88.2
26	23	8.3	92.1	21	7.3	95.5
27	22	7.9	100.0	13	4.5	100.0

<u>Scores</u>	GRADE 3			GRADE 4		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
15	0	0	0	0	0	0
16	0	0	0	1	.3	.3
17	0	0	0	2	.7	1.0
18	67	21.7	21.7	67	22.6	23.6
19	36	11.6	33.3	39	13.2	36.8
20	24	7.8	41.1	29	9.8	46.6
21	24	7.8	48.9	33	11.1	57.7
22	27	8.8	57.7	31	10.5	68.2
23	31	10.1	67.8	23	7.8	76.0
24	29	9.4	77.2	13	4.4	80.4
25	23	7.5	84.7	24	8.1	88.5
26	24	7.8	92.5	16	5.4	93.9
27	23	7.5	100.0	18	6.1	100.0

ADULT CLOSENESS SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
2	0	0	0	1	.3	.3
3	7	2.5	2.5	2	.7	1.0
4	26	9.4	11.9	19	6.6	7.6
5	62	22.4	34.3	49	17.1	24.7
6	182	65.7	100.0	215	75.3	100.0

<u>Score</u>	GRADE 3			GRADE 4		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
2	0	0	0	0	0	0
3	1	.3	.3	1	.3	.3
4	21	6.8	7.1	41	13.9	14.2
5	39	12.7	19.8	43	14.5	28.7
6	247	80.2	100.0	211	71.3	100.0

SOCIAL CONFORMITY SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
10	2	.7	.7	1	.3	.3
11	4	1.4	2.1	0	0	.3
12	3	1.1	3.2	8	2.8	3.1
13	13	4.7	7.9	7	2.4	5.5
14	26	9.4	17.3	7	2.4	7.9
15	31	11.2	28.5	21	7.3	15.2
16	29	10.5	39.0	18	6.3	21.5
17	46	16.6	55.6	42	14.8	36.3
18	123	44.4	100.0	182	63.7	100.0

<u>Score</u>	GRADE 3			GRADE 4		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
10	0	0	0	0	0	0
11	1	.3	.3	0	0	0
12	7	2.3	2.6	1	.3	.3
13	5	1.6	4.2	7	2.4	2.7
14	5	1.6	5.8	8	2.7	5.4
15	17	5.5	11.3	18	6.1	11.5
16	24	7.8	19.1	26	8.8	20.3
17	52	16.9	36.0	66	22.3	42.6
18	197	64.0	100.0	170	57.4	100.0

SOCIABILITY SCORES BY GRADE

<u>Score</u>	GRADE 1			GRADE 2		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
9	0	0	0	1	.3	.3
10	1	.4	.4	1	.3	.6
11	1	.4	.8	4	1.4	2.0
12	8	2.9	3.7	13	4.5	6.5
13	22	7.9	11.6	11	3.8	10.3
14	45	16.2	27.8	26	9.1	19.4
15	39	14.1	41.9	29	10.1	29.5
16	46	15.9	57.8	44	15.5	45.0
17	50	18.1	75.9	45	15.7	60.7
18	67	24.1	100.0	112	39.3	100.0

<u>Score</u>	GRADE 3			GRADE 4		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
9	0	0	0	0	0	0
10	0	0	0	0	0	0
11	0	0	0	0	0	0
12	4	1.3	5	5	1.7	1.7
13	14	4.5	5.8	12	4.1	5.8
14	19	6.2	12.0	13	4.4	10.2
15	36	11.7	23.7	28	9.5	19.7
16	38	12.3	36.0	39	13.2	32.9
17	71	23.1	59.1	57	19.2	52.1
18	126	40.9	100.0	142	47.9	100.0

ASOCIAL SCORES BY RACE

Score	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
6	0	0	0	0	0	0	1	.2	.2
7	0	0	0	0	0	0	1	.2	.4
8	7	1.5	1.5	3	1.2	1.2	5	1.2	1.6
9	107	22.3	23.8	45	17.6	18.8	79	18.2	19.8
10	26	5.4	29.2	11	4.3	23.1	27	6.3	26.1
11	43	8.9	38.1	10	3.9	27.0	20	4.6	30.7
12	72	15.0	53.1	31	12.2	39.2	69	15.9	46.6
13	27	5.6	58.7	12	4.7	43.9	25	5.7	52.3
14	17	3.5	62.2	13	5.1	49.0	15	3.5	55.8
15	33	6.9	69.1	13	5.1	54.1	27	6.3	62.1
16	16	3.3	72.4	6	2.4	56.5	16	3.7	65.8
17	14	2.9	75.3	11	4.3	60.8	18	4.2	70.0
18	18	3.7	79.0	15	5.9	66.7	24	5.6	75.6
19	6	1.2	80.2	6	2.4	69.1	8	1.9	77.5
20	11	2.3	82.5	1	.4	69.5	12	2.8	80.3
21	18	3.7	86.2	14	5.5	75.0	15	3.5	83.8
22	7	1.5	87.7	7	2.8	77.8	8	1.9	85.7
23	5	1.0	88.7	4	1.6	79.4	4	.9	86.6
24	11	2.3	91.0	12	4.7	84.1	11	2.6	89.2
25	7	1.5	92.5	7	2.8	86.9	8	1.9	91.1
26	5	1.0	93.5	9	3.5	90.4	5	1.2	92.3
27	10	2.1	95.6	4	1.6	92.0	9	2.1	94.4
28	3	.6	96.2	7	2.8	94.8	4	.9	95.3
29	6	1.2	97.4	1	.4	95.2	3	.7	96.0
30	2	.4	97.8	5	2.0	97.2	6	1.4	97.4
31	3	.6	98.4	3	1.2	98.4	3	.7	98.1
32	2	.4	98.8	1	.4	98.8	2	.5	98.6
33	2	.4	99.2	2	.8	99.6	3	.7	99.3
34	1	.2	99.4	0	0	99.6	0	0	99.3
35	2	.4	99.8	0	0	99.6	0	0	99.3
36	1	.2	100.0	1	.4	100.0	3	.7	100.0

ACADEMIC SCORES BY RACE

Score	Anglo			Negro			Mexican-American		
	Freq	%	Cum %	Freq	%	Cum %	Freq	%	Cum %
9	1	.2	.2	0	0	0	1	.2	.2
10	2	.4	.6	0	0	0	0	0	.2
11	1	.2	.8	2	.8	.8	0	0	.2
12	0	0	.8	1	.4	1.2	0	0	.2
13	3	.6	1.4	2	.8	2.0	1	.2	.4
14	1	.2	1.6	2	.8	2.8	3	.7	1.1
15	8	1.7	3.3	2	.8	3.6	4	.9	2.0
16	2	.4	3.7	1	.4	4.0	1	.2	2.2
17	10	2.1	5.8	8	3.1	7.1	8	1.9	4.1
18	16	3.3	9.1	3	1.2	8.3	6	1.4	5.5
19	14	2.9	12.0	7	2.8	11.1	9	2.1	7.6
20	15	3.1	15.1	4	1.6	12.7	13	3.0	10.6
21	14	2.9	18.0	2	.8	13.5	11	2.6	13.2
22	24	5.0	23.0	18	7.1	20.6	16	3.7	16.9
23	33	6.8	29.8	11	4.3	24.9	21	4.9	21.8
24	31	6.4	36.2	11	4.3	29.2	32	7.4	29.2
25	42	8.7	44.9	16	6.3	35.5	19	4.4	33.6
26	44	9.1	54.0	26	10.2	45.7	35	8.1	41.7
27	31	6.4	60.4	20	7.9	53.6	35	8.1	49.8
28	36	7.5	67.9	21	8.3	61.9	21	4.9	54.7
29	50	10.4	78.3	29	11.4	73.3	49	11.4	66.1
30	30	6.2	84.5	10	3.9	77.2	34	7.9	74.0
31	22	4.6	89.1	15	5.9	83.1	32	7.4	81.4
32	52	10.9	100.0	43	16.9	100.0	80	18.6	100.0

MASCULINITY SCORES BY RACE

<u>Score</u>	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
3	1	.2	.2	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	.2	0	0	0	3	.7	.7
7	23	4.8	5.0	8	3.1	3.1	15	3.5	4.2
8	16	3.3	8.3	7	2.8	5.9	19	4.4	8.6
9	24	5.0	13.3	11	4.3	10.2	25	5.8	14.4
10	24	5.0	18.3	18	7.1	17.3	43	10.0	24.4
11	49	10.1	28.4	17	6.7	24.0	27	6.3	30.7
12	39	8.1	36.5	20	7.9	31.9	43	10.0	40.7
13	42	8.7	45.2	25	9.8	41.7	55	12.7	53.4
14	41	8.5	53.7	17	6.7	48.4	33	7.6	61.0
15	37	7.7	61.4	31	12.3	60.7	21	4.9	65.9
16	44	9.1	80.5	26	10.2	70.9	36	8.3	74.2
17	23	4.8	75.3	12	4.7	75.6	14	3.2	77.4
18	24	5.0	80.3	12	4.7	80.3	28	6.5	83.9
19	22	4.6	84.9	11	4.3	84.6	27	6.3	90.2
20	23	4.8	89.7	8	3.1	87.7	7	1.6	91.8
21	10	2.1	91.8	14	5.5	93.2	9	2.1	93.9
22	14	2.9	94.7	3	1.2	94.4	10	2.3	96.2
23	6	1.2	95.9	5	2.0	96.4	3	.7	96.9
24	11	2.3	98.2	0	0	96.4	5	1.2	98.1
25	5	1.0	99.2	6	2.4	98.8	6	1.4	99.5
26	1	.2	99.4	1	.4	99.2	2	.5	100.0
27	2	.4	99.8	2	.8	100.0	0	0	100.0
28	1	.2	100.0	0	0	100.0	0	0	100.0

ME FIRST SCORES BY RACE

<u>Score</u>	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
15	0	0	0	0	0	0	1	.2	.2
16	3	.6	.6	1	.4	.4	2	.5	.7
17	3	.6	1.2	3	1.2	1.6	1	.2	.9
18	107	22.3	23.5	30	11.9	13.5	76	17.7	18.6
19	57	11.8	35.3	26	10.2	23.7	49	11.4	30.0
20	43	8.9	44.2	21	8.3	32.0	40	9.3	39.3
21	43	8.9	53.1	29	11.4	43.4	56	13.0	52.3
22	42	8.7	61.8	25	9.8	53.2	48	11.1	63.4
23	48	10.0	71.8	25	9.8	63.0	32	7.4	70.8
24	43	8.9	80.7	26	10.2	73.2	40	9.3	80.1
25	36	7.5	88.2	25	9.8	83.0	26	6.0	86.1
26	30	6.2	94.4	22	8.7	91.7	32	7.4	93.5
27	27	5.6	100.0	21	8.3	100.0	28	6.5	100.0

ADULT CLOSENESS SCORES BY RACE

<u>Score</u>	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
2	0	0	0	0	0	0	1	.2	.2
3	3	.6	.6	4	1.6	1.6	4	.9	1.1
4	40	8.3	8.9	21	8.3	9.9	46	10.7	11.8
5	79	16.4	25.3	50	19.7	29.6	64	14.8	26.6
6	360	74.7	100.0	179	70.4	100.0	3.6	73.4	100.0

SOCIAL CONFORMITY BY RACE

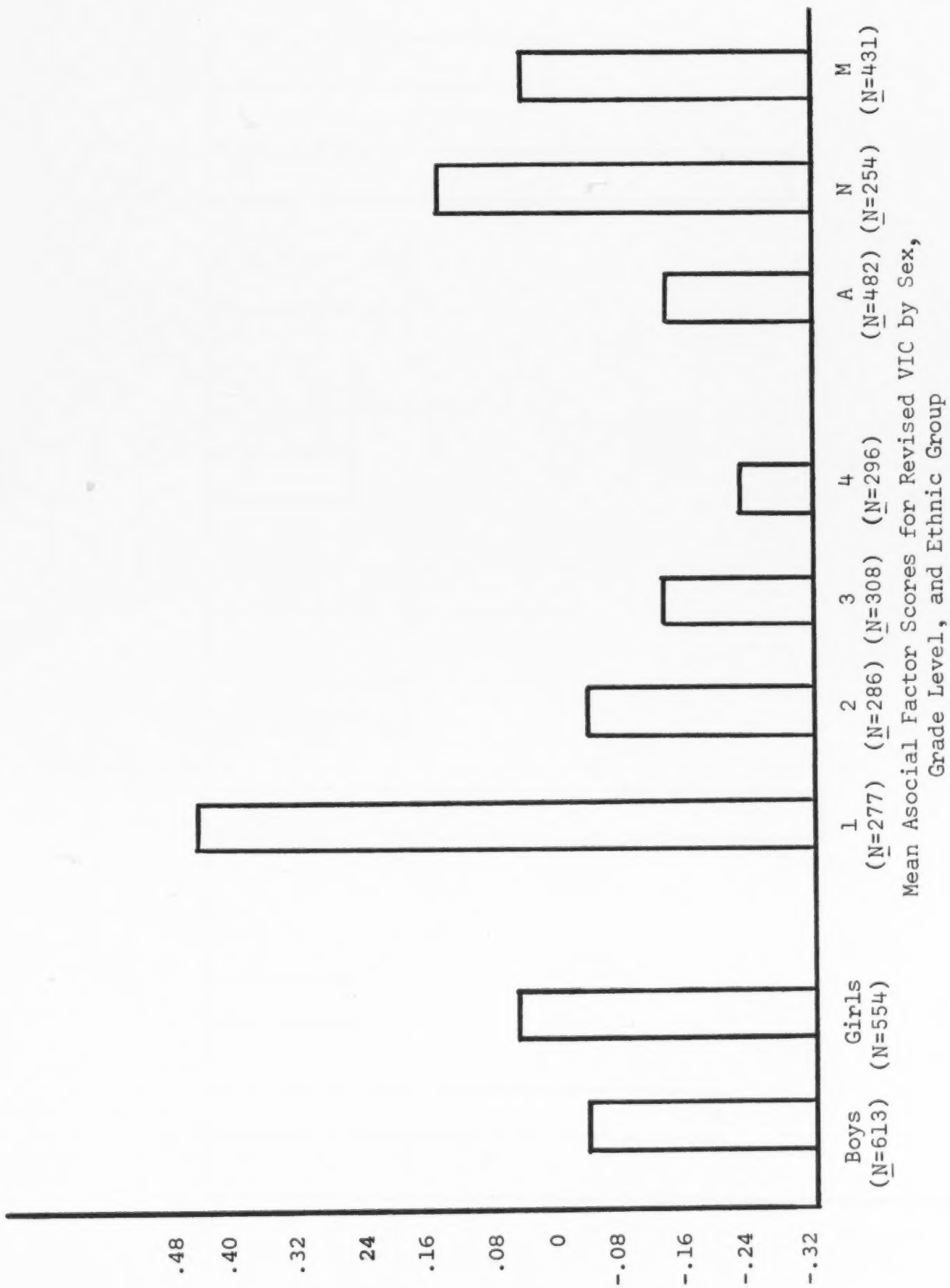
<u>Score</u>	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
10	1	.2	.2	1	.4	.4	1	.2	.2
11	0	0	.2	0	0	0	5	1.2	1.4
12	8	1.7	1.9	6	2.4	2.8	5	1.2	2.6
13	13	2.7	4.6	11	4.3	7.1	8	1.9	4.5
14	17	3.5	8.1	15	5.9	13.0	14	3.2	7.7
15	34	7.1	15.2	22	8.7	21.7	31	7.2	14.9
16	36	7.5	22.7	24	9.4	31.1	37	8.6	23.5
17	79	16.4	39.1	50	19.7	50.8	77	17.9	41.4
18	294	60.9	100.0	125	49.2	100.0	253	58.6	100.0

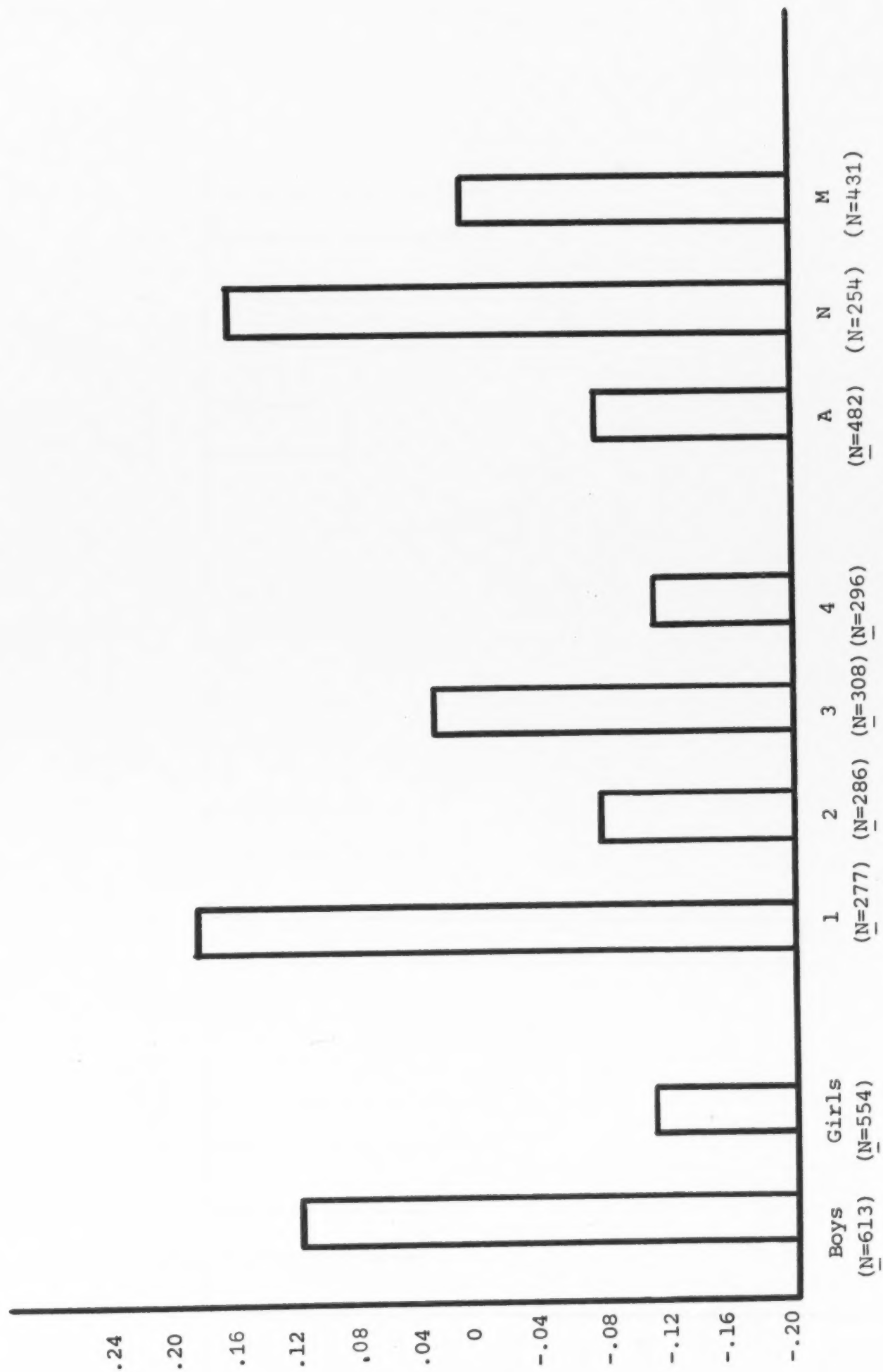
SOCIABILITY SCORES BY RACE

<u>Score</u>	<u>Anglo</u>			<u>Negro</u>			<u>Mexican-American</u>		
	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>	<u>Freq</u>	<u>%</u>	<u>Cum %</u>
9	0	0	0	0	0	0	1	.2	.2
10	2	.4	.4	0	0	0	0	0	.2
11	3	.6	1.0	1	.4	.4	1	.2	.4
12	11	2.3	3.3	8	3.1	3.5	11	2.6	3.0
13	22	4.6	7.9	15	5.9	9.4	22	5.1	8.1
14	46	9.5	17.4	19	7.5	16.9	38	8.8	16.9
15	58	12.0	29.4	36	14.2	31.1	38	8.8	25.7
16	69	14.3	43.7	37	14.6	45.7	59	13.7	39.4
17	85	17.6	61.3	51	20.1	65.8	87	20.2	59.6
18	186	38.7	100.0	87	34.2	100.0	174	40.4	100.0

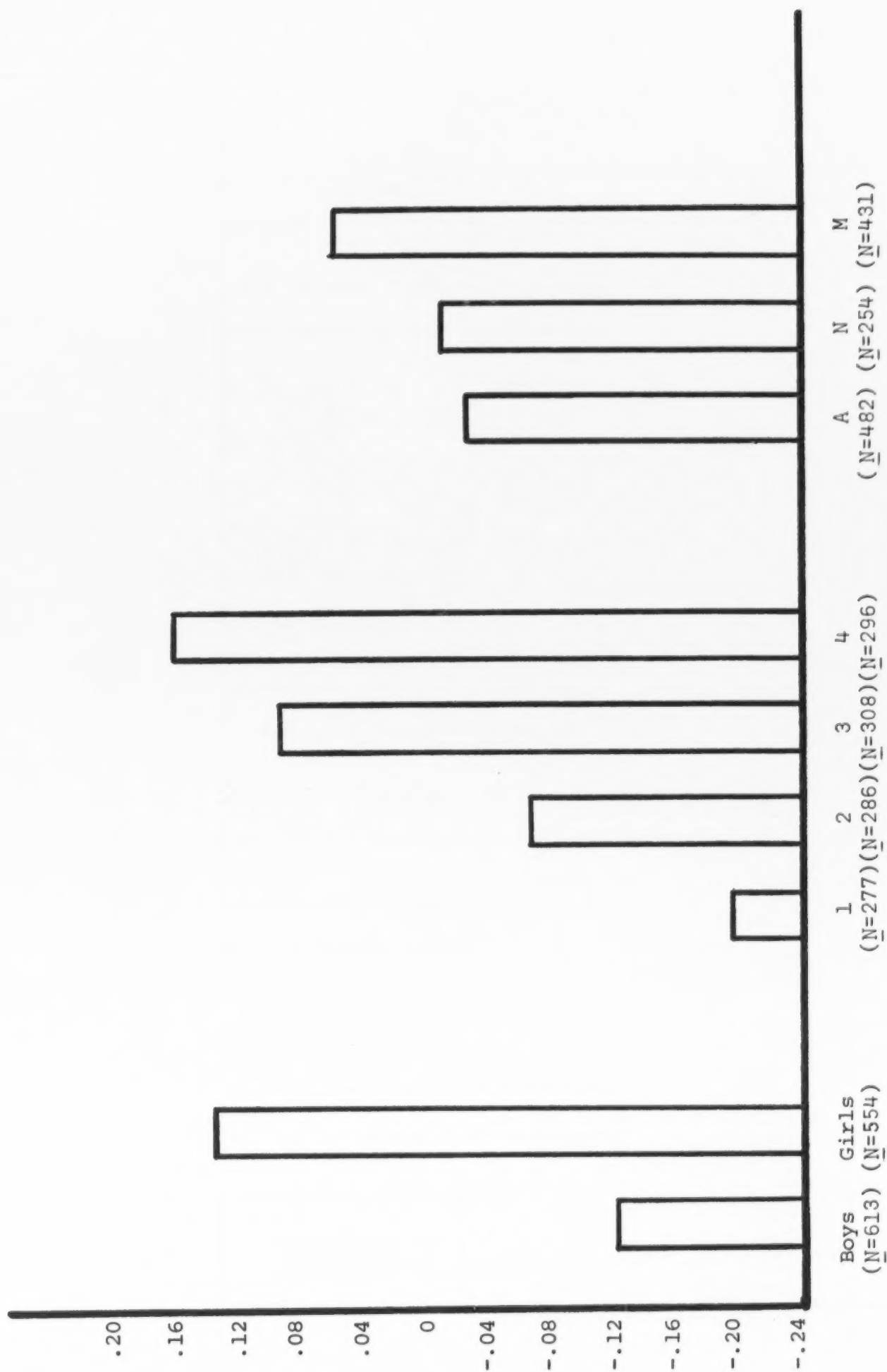
APPENDIX I

Graphic Representation of Factor Scores for Revised VIC

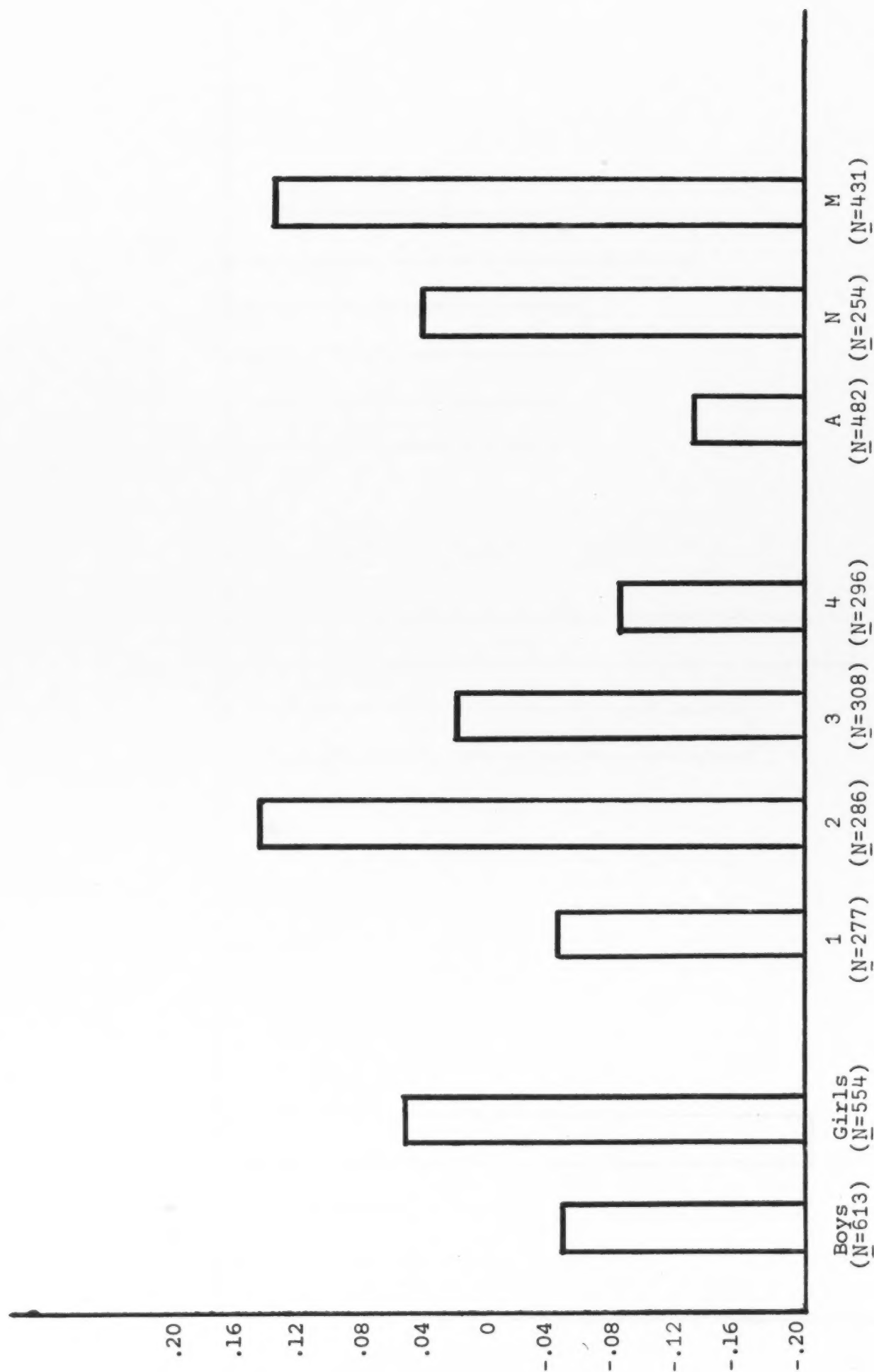




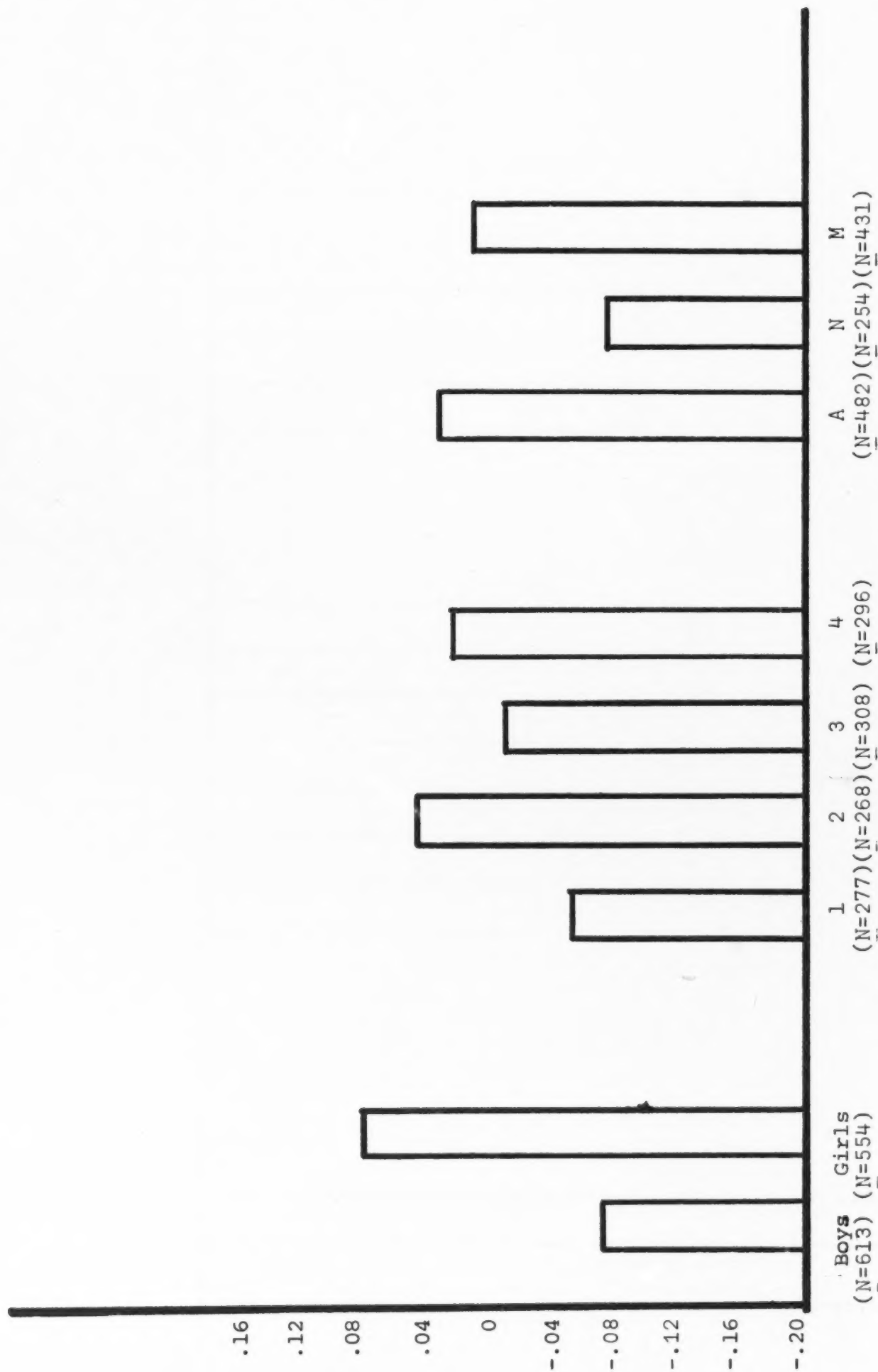
Mean Me First Factor Scores for Revised VIC by Sex,
Grade Level, and Ethnic Group



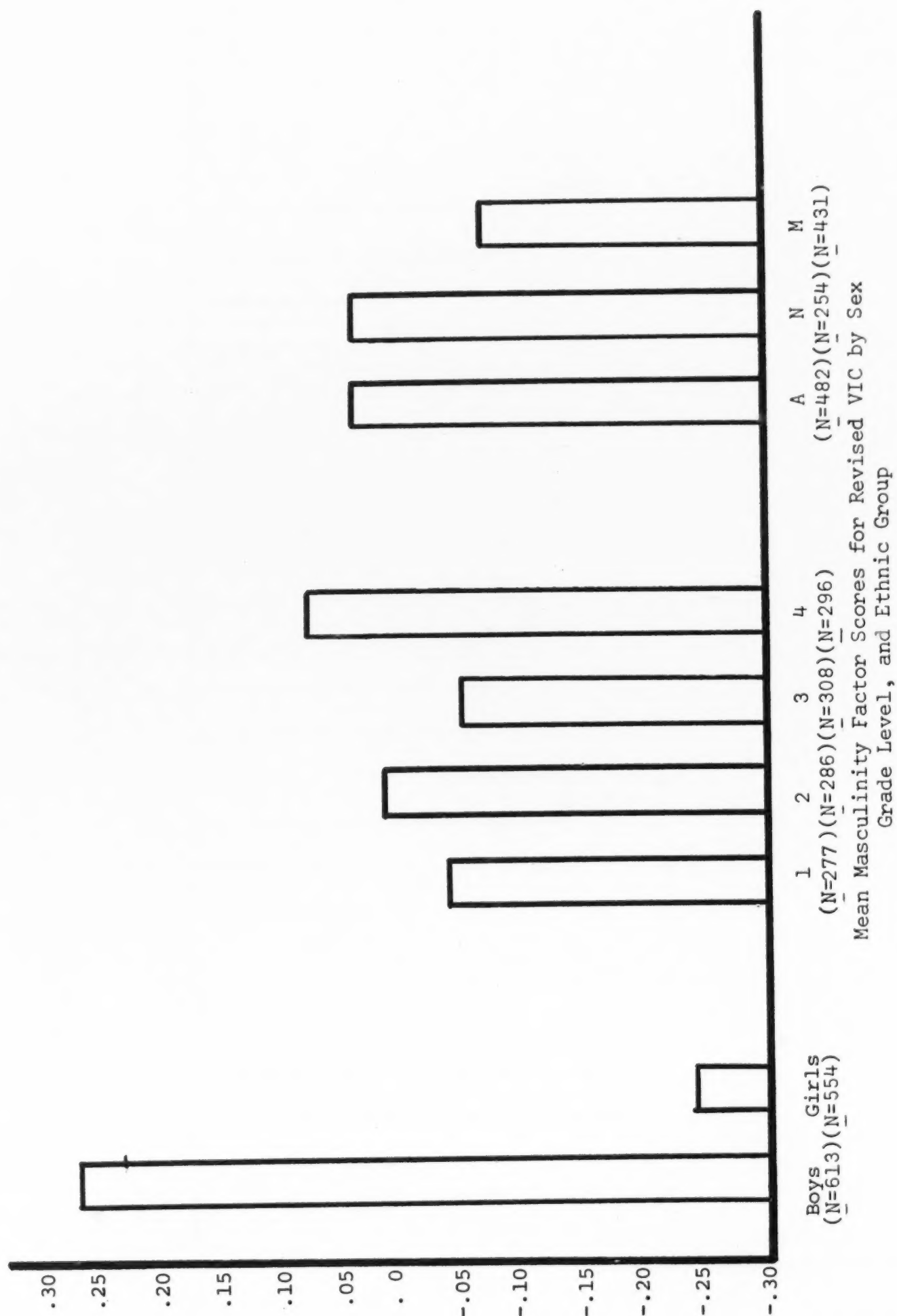
Mean Sociability Factor Scores for Revised VIC by Sex,
Grade Level, and Ethnic Group

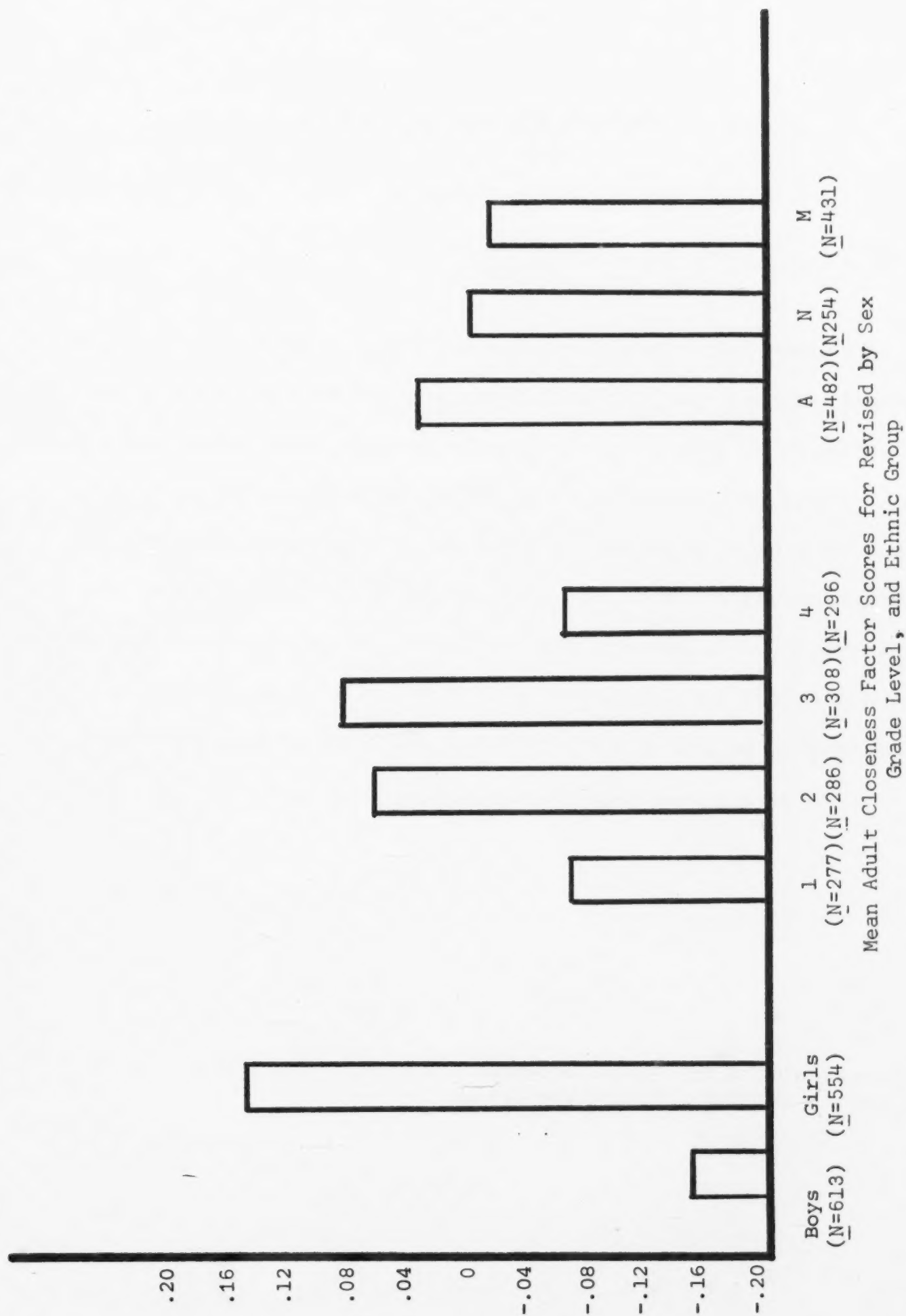


Mean Academic Factor Scores for Revised VIC by Lax,
Grade Level, and Ethnic Group



Mean Social Conformity Factor Scores for Revised
VIC by Sex, Grade Level, and Ethnic Group





APPENDIX J

Abstract

Delinquent Values: It's Fun to Break the Rules

Lisbeth Goldberg

Joan S. Guilford

The need for a nonverbal measure of values for the prediction of delinquent behavior resulted in the application of the Values Inventory for Children (VIC) and the creation of the Juvenile Attitude/Interest List (JAIL). These instruments were administered to 207 delinquents and a comparable sample of 180 non-delinquents. Factor analysis of the combined instruments revealed six orthogonal dimensions: (a) Acting Out; (b) Academic; (c) Delinquent; (d) Masculine; (e) Alienated; (f) Sociopathic. The factor scores for delinquents were significantly higher than those for non-delinquents on Delinquent, Alienated, and Sociopathic. Factor scores for non-delinquents were significantly higher for Masculine.

Paper presented at the Annual Meeting of the American Psychological Association, Honolulu, September, 1972.

Delinquent Values: It's Fun to Break the Rules

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It has been stated that the domain of values is important in the understanding and treatment of juvenile delinquency. More important, however, is the need to detect asocial and/or delinquency-oriented attitudes or values before they become manifest in overt behavior and the child becomes a problem to society. At present, there is no non-verbal ethnically unbiased measure of values available for use in the prediction of maladaptive social behavior and suitable for use in the years before the child expresses his value system in socially unacceptable ways.

That a non-verbal test would be useful in this endeavor can be deduced from the fact that most delinquents (and pre-delinquents, for that matter) have a relatively low reading level as compared with the average school population.

The best-known test designed specifically for delinquent youth is the Jesness Inventory (Jesness, 1963), a 155-item, true-false, self-report personality and attitude inventory designed for use with adolescents and pre-adolescents. Other instruments which have been used are the Delinquency Potential Scale, (Gunderson, Ballard, & Huge, 1958) developed primarily for use with Navy recruits, the Delinquency Proneness Scale (Kvarceus, 1953) and the MMPI. However, none of these is specifically designed to measure values and all are at a relatively high verbal level.

In the development of the Values Inventory for Children (VIC) (Guilford, Gupta, & Goldberg, 1971; Guilford & Gupta, 1971) a non-verbal measure of values applicable to children in grades one through three, a number of dimensions were found to be related to both classroom behavior and academic achievement. The VIC consists of 60 items in pictorial form. The pictures represent objects and situations to which the child may relate and about which he must make a value judgment in terms of his "liking" for what is depicted. In most pictures there is a picture subject with whom the child is to identify himself, having been given the instruction "This is you." The picture subject (a boy in the Boy form and a girl in the Girl form) is ethnically unidentifiable. Thirty of the items are single-stimulus, multiple-response items, in which S responds with the degree to which he "likes" what is happening in the picture, by circling one of four faces with different expressions. The other thirty are two-stimulus, one-response items in which the child is presented with two pictures and he must first find the difference between them and then mark the one he "likes best." In the original development of the VIC five ethnic groups were tested.

A factor analysis of the VIC items indicated that there were seven underlying value dimensions: (a) Social Conformity; (b) Asocial Behavior;

(c) Sociability; (d) Academic; (e) Adult Closeness; (f) Masculinity; and (g) Me First (dominant, selfish behavior). The relationships between some of these dimensions and criteria of teacher ratings and reading scores suggested that the concepts contained in the inventory might well be predictive of maladaptive school behavior not only for these young children, but for older children as well.

The purpose of the study, then, was to attempt to apply the VIC to samples of delinquents and non-delinquents to determine: (a) those items which would differentiate between them; (b) the factor structure at this older age level, i. e., junior high school; and (c) which, if any, of the factor scores derived from the factor analysis would differentiate between delinquents and non-delinquents. It was hoped that this would lead to the development of a more sophisticated instrument, more appropriate and relevant to this age group.

Subjects

The Ss who comprised the delinquent group ($N=207$) were obtained in three Los Angeles County Probation Department detention facilities. The non-delinquent group ($N=180$) consisted of all seventh and eighth graders attending a summer session of Junior High School in a community near Los Angeles. The two groups were roughly equivalent with respect to ethnic composition, age, sex, and socioeconomic status, as verified by records from the County Probation Department and the community within which the non-delinquents resided.

In order to ensure that no delinquents would be included in the non-delinquent sample, this information was obtained simply by asking Junior High School Ss whether or not they were or had been on probation. Those few ($N=11$) who answered affirmatively were excluded from the study. Since Ss remained anonymous, it can be assumed that their responses were honest.

Procedure

The VIC was administered to the 387 youngsters who comprised the sample for this study. Answer sheets had been developed and used successfully with third-grade children. They were also used with these older children.

In addition to the VIC, the Juvenile Attitude/Interest List (JAIL) was developed in order to include items which would be of greater relevance to teen-agers than are the less sophisticated VIC items. Development of the JAIL proceeded as follows: First, a review was made of the literature related to both delinquency and youth and their correlates (e. g., the Jesness Inventory, 1963; the Navy's Delinquency Potential Scale, Gunderson, Ballard, & Huge, 1958; the Delinquency Scale based on the MMPI, Hathaway & Monachesi 1951; and the Mooney Problems Check List, 1950). These instruments were examined for common concepts. From these sources, as well as personal experience with both delinquent and non-delinquent teenagers and preteens, a 100-item inventory was constructed. The items consisted primarily of one-word stimuli, well within the reading comprehension of most fourth-grade children, to which the respondent was to reply with "Like," "Don't Care," and "Dislike." The list was administered to samples

of teenagers from relatively middle class communities. Items that did not demonstrate any variability were eliminated. Second, simultaneously with the administration of the preliminary JAIL form, a select sample of seventh and eighth graders was given a form derived from the ECHO system (Barthol & deMille, 1969), inquiring as to what the respondents thought were "good" things to do and "bad" things to do for a person their age. The final instrument consisted of 75 items to which the response choices were the same as for the 100 items described above. The final form of the JAIL was administered to Ss at the same time as was the VIC. The only identifying information required was the sex of S.

Results

The analyses performed consisted of t tests of the differences in responses between delinquents and non-delinquents. Thirty-four of the VIC items and 41 of the JAIL items differentiated at the .05 level of significance or better.

A factor analysis was performed on the 135 items from the combined instruments. Six factors were extracted by the principal factors method and rotated to an orthogonal structure by the Varimax method. Items that did not load on any of the factors were deleted; thus, 47 items from the combined VIC and JAIL were lost, 30 from VIC and 17 from JAIL. The remaining 88 items were again factor analyzed, yielding a structure of six orthogonal factors, obtained by the same methods as described above. The six factors, defined on the basis of their highest loading items, were: I. Acting Out (destructive, aggressive behavior, consisting of liking such things as running away, breaking things, playing tricks, fighting, etc.); II. Academic (liking school, studying, classroom, teacher, etc.); III. Delinquent (liking smoking "grass," smoking cigarettes, hard liquor and disliking police, laws, etc.); IV. Masculine (objects or activities that boys usually like better than girls, such as guns, knives, soldier, etc.); V. Alienated (disliking pets and marriage, and liking lying, divorce, littering, and, perhaps, the ultimate alienation -- dying); and VI. Sociopathic (a collection of items pointing to an immature, "I'm going to get mine, regardless of anything or anybody" sort of philosophy).

It is interesting to note that the items comprising Factor III, Delinquent, were those that differentiated most highly between delinquents and non-delinquents. When a factor analysis was performed including the variable "delinquent" (scored yes or no), that variable loaded only on Factor III and had the highest loading on that factor (.82).

Where there was overlap in the content of items on VIC and JAIL, the overlapping items fell together on appropriate factors, indicating that the picture format received the same response as the verbal expression.

Comparison of the factor scores of delinquents with those of non-delinquents by means of t tests, indicated that delinquents scored significantly higher than non-delinquents on three of the six factors: Delinquent; Alienated; and Sociopathic. Non-delinquents had higher factor scores on the Masculine factor. (The significance level is always $p < .01$). Factors labeled Academic and Acting Out did not differentiate.

Intercorrelations of the factor scores were nonsignificant, with the exception of the correlation between Acting Out and Alienated ($r = .105$; $p = < .05$).

Conclusions

This study was conducted to determine the appropriateness of the techniques used to construct the VIC to development of a test suitable for older children. It is clear that, in view of the high number of items from both the VIC and the JAIL which differentiated between delinquents and non-delinquents, a non-verbal instrument is eminently useful in determining such differences.

The fact that factor scores on Factors III, IV, V, and VI also differentiated between delinquents and non-delinquents, supports the utility of such an instrument.

In addition, it has been found that responses to the pictures are far more honest than responses to equivalent verbal expressions, and are, therefore, less susceptible to social desirability response biases. Furthermore, most children of all ages as well as adults have reported that taking the VIC is "fun," and therefore elicits a greater amount of cooperation than many verbal tests.

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